























# **MINIMUM ESSENTIAL GOALS FOR INDIAN SCHOOLS**

**Levels Seven, Eight, and Nine**

**REVISED EDITION**

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS  
BRANCH OF EDUCATION**

Washington 25, D. C.

**UNITED STATES  
DEPARTMENT OF THE INTERIOR**

**Stewart L. Udall, Secretary**

**BUREAU OF INDIAN AFFAIRS  
John O. Crow, Acting Commissioner**

**BRANCH OF EDUCATION  
Hildegard Thompson, Chief**

**PRICE: 60¢**

**ORDER FROM  
PUBLICATIONS SERVICE  
HASKELL INSTITUTE  
LAWRENCE, KANSAS**



*Indian Education: Minimum of Indian Affairs*

# MINIMUM ESSENTIAL GOALS FOR INDIAN SCHOOLS

Levels Seven, Eight, and Nine

1955

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS  
BRANCH OF EDUCATION





CONTENTS

	Page
PREFACE .....	i
COMMITTEES AND CONSULTANTS .....	ii
SUPPLEMENTS	
A. Characteristics of Teenagers .....	iii
B. Suggestions to Teachers of Reading .....	v
C. Commonly Used and Misspelled Words .....	vii
D. A Sample Unit .....	x
CIVIC RESPONSIBILITIES .....	1
Level Seven .....	3
Level Eight .....	15
Level Nine .....	23
COMMAND OF FUNDAMENTAL PROCESS .....	31
Arithmetic:	
Level Seven .....	33
Level Eight .....	39
Level Nine .....	45
English:	
Level Seven .....	53
Level Eight .....	63
Level Nine .....	71
SCIENCE .....	81
Level Seven .....	83
Level Eight .....	91
Level Nine .....	107

CONTENTS (Contd.)

	Page
HEALTH .....	129
Level Seven .....	131
Level Eight .....	137
Level Nine .....	143
 VOCATIONS .....	 151
Level Seven .....	153
Level Eight .....	162
Level Nine .....	167
 BOOKS LISTED IN FOOTNOTES .....	 177
 BOOKS POPULAR WITH JUNIOR HIGH SCHOOL READERS .....	 185



## PREFACE

This revised edition of Minimum Essential Goals for Levels Seven, Eight and Nine has been prepared for the Bureau of Indian Affairs, Branch of Education. The material is the outcome of committees working intensively during three summer-school sessions. The materials and suggestions sent in from the field have been carefully analyzed and incorporated.

As the committees worked, they interpreted a goal as meaning **what** to teach, the activities as suggestions on **how** to teach. It should be emphasized that the activities are only suggestions; a good teacher will develop more. Realizing that the teacher should be familiar with the goals both preceding and following the level of his class, the committee has incorporated the three levels into one volume.

Both goals and activities should be included in the units of work that are being planned by the school for the year, and they should never be taught separately. Units of work should not be planned around the goals; achievement of goals should be the outcome of units.

We recommend that the administrator with the help of the staff determine:

1. How the goals are to be used.
2. Where the goals shall be placed. (These goals do not necessarily have to be taught at the level designated.)
3. Who will be responsible for teaching each goal.

Since this is one of many revisions, the committee urges teachers to keep a record of any new activities and goals they feel would help to further the development of the Minimum Essential Goals. The references included are suggestions, and each teacher will want to make additions.

The value of the Minimum Essential Goals will be fully realized only if the administrators, beginning at the Area level, will emphasize and encourage their use.

MINIMUM ESSENTIAL GOALS  
LEVELS SEVEN, EIGHT, AND NINE  
CONSULTANTS

John Carmody .....	Assistant Director, Navajo Schools
Ira Bowman .....	Vocations
Edith Craig .....	Vocations
Vernon Forney, D. D. S. ....	Health
Albert A. Gallen .....	Reading
Gertrude Giesen .....	Librarian
Louisa Haas .....	Health
Cleora C. Helbing .....	Vocations
Earl C. Intolubbe .....	Guidance
Orpha McPherson, Ph. D. ....	Academic
Katherine C. Rose .....	Health
Mamie M. Searles .....	Vocations
Jeannette J. Simmons .....	Health
Willa Vaughn Tinsley .....	Vocations
Edgar L. Wight .....	Science

June 1951

Leader .....	Hildegard Thompson
Assistant Leader .....	Dorothea Dennis
Chairman .....	Edith Ishmael
Members:	Nora A. Benton, Frank Crowell, Gertrude Flanagan, Gladys Hershey, Edgar Samons

June 1952

Leader .....	Norma C. Runyan
Assistant Leader .....	Dorothea Dennis
Chairman .....	Edgar L. Samons
Members:	Nora A. Benton, Norman H. Gregory, Gladys Hershey, Glerin C. Lundeen, Jessie O. Whiting

June 1953

Leader .....	Glenn C. Lundeen
Members:	Gladys Hershey, Esther B. Horne, Edgar L. Samons, Leon Wall, Jessie O. Whiting

June 1955

Leaders .....	Paul Bramlet Glenn C. Lundeen
Members:	Sam Beller, Rosemary Davey, Edith Ishmael, Mae Maness, Ellen Schatz, Margaret Schiffbauer, Betsy Nakashima

## SUPPLEMENT A

### CHARACTERISTICS OF TEENAGERS

1. Bodily changes during the period of puberty, which may be reached by girls from 10-16, by boys from 12-16.
2. Intense sensitivity concerning his personal appearance.
3. Increasing interest in the opposite sex, coming earlier in girls, who often consider themselves social failures if boys are uninterested in them.
4. Need for a wholesome outlet for physical energy.
5. Frequent lack of energy, due to rapid growth or growth spurts.
6. Inability to concentrate on one thing for a long period of time.
7. Tendency to daydream and to search for ideals and standards.
8. Desire for fun and excitement.
9. Desire to attract attention by doing or saying startling things.
10. Demand for freedom, economic independence, and the experiences and privileges of an adult.
11. Frankness and freedom in expression of opinions. Not all have the courage to do this.
12. Desire for responsibility but a lack of capacity for mature judgment required to follow through. An adolescent may act as if he "knows it all," even though he is uncertain within himself.
13. Awareness of limitations.
14. Tendency to be over-critical of parents and teachers.
15. Tendency to expect help from parents and teachers, yet to resent being told what to do.
16. Strong identification with an admired adult or a person of his own age.
17. Tendency to respond better to the influence of teachers and other adults than to that of parents.



## CHARACTERISTICS OF TEENAGERS

18. Need for recognition and approval by his peers of both sexes and for the feeling of belonging to the group.
19. Need for approval from adults.
20. Need for security and affection.
21. Intimate friendship with members of his own sex.
22. Conformity to the group with which he identifies himself at the time. The pattern of behavior will swing between childish and adult behavior, a fact which accounts for his being sometimes defiant and rebellious, and at other times cooperative and responsible.
23. Inconsistency in moods and interests from day to day.
24. Tendency toward exaggerated emotional response.
25. Sensitivity to criticism, which may cause him to resort to unpredictable behavior.
26. Tendency to resent one of his own age who stands out from the group, although he may secretly admire his courage.

## SUPPLEMENT B

### SUGGESTIONS TO TEACHERS OF READING

1. Give standardized reading tests to determine the approximate reading level of each student.
2. Divide the class into groups of similar reading levels.
3. Give diagnostic tests in reading to any student who has unusual reading problems to determine the nature of the difficulty.
4. Check the reading habits of the students through observation and individual conferences throughout the year.
5. Try to obviate the need for remedial reading by proper grouping, teaching techniques, and suitable material.
6. Supply for the classroom a variety of interesting material on the reading levels of the students.
7. Make use of a central library where many books interesting to all students are available.
8. Determine the chief interests of the student and assist him to find books and periodicals dealing with these interests.
9. Provide many situations in which the student needs to read for information which he brings back to share with the class.
10. Provide many experiences in reading for different purposes, such as skimming, following directions, reading for entertainment, reading to remember, looking for main ideas or central thought. Assist the student to know when to use each method of reading.
11. Make sure that English idioms are understood by all children.
12. Continue definite vocabulary development. Teach each student the use of the dictionary. Encourage him to keep his own list of new words added to his vocabulary. Introduce new words before the student attempts to read a selection in which he will encounter them. New words should always be introduced in connection with the content, never as an isolated drill.
13. Develop effective techniques in word attack, such as using common roots, prefixes, suffixes, and derivatives.
14. Make the student aware of the importance of his eye span in reading and the advantage of increased speed resulting from widening this span.

## SUGGESTIONS TO TEACHERS OF READING (Cont'd.)

15. Supply questions and suggestions as a reading guide for new material in order to help the student know what to look for until he acquires sufficient skill to read independently.
16. Encourage the use of outlines and summaries when needed to clinch main ideas found in reading.
17. Develop and teach the techniques of oral reading, such as effective phrasing, speaking clearly and distinctly, placing emphasis correctly, accepted pronunciation, pleasing voice, avoiding a reading tone, holding the head and the book correctly, and the projection of the reader's personality to his listeners.
18. Provide opportunities for oral reading and recognition of good readers.
19. Use a tape recorder to give the student an opportunity to criticize his oral reading.
20. Keep the student informed of his progress in reading skills.
21. Challenge the student to reach higher levels of reading.
22. Keep reading purposeful.
23. Make each reading experience as enjoyable as possible.

SUPPLEMENT C

COMMONLY USED AND MISPELLED WORDS

accept	beginning	costume	eighth	friend
accommodate	believe	courteous	enough	getting
acquaint	benefit	cousin	embarrass	girl
across	bicycle	custom	employee	government
advice	blew	decide	every	governor
all right	boundary	decision	except	grammar
already	break	definite	excitement	guard
always	burst	democratic	exciting	half
and	business	describe	experience	having
any	busy	desert	false	height
ambition	buy	dessert	familiar	hoarse
among	can't	determine	families	hole
analyze	capital	develop	family	hoping
answer	capitol	different	favorite	horse
appearance	captain	dining	February	hospital
appreciate	careful	disappear	fierce	humor
article	character	disappoint	finally	immediately
athletics	chose	doctor	find	Indian
attendance	climb	does	first	interesting
author	clothes	doesn't	foreign	isn't
beautiful	college	dormitory	forty	its
because	coming	dropped	fourth	it's
before	committee	drowned	Friday	jealous



## COMMONLY USED AND MISSPELLED WORDS (Cont'd)

know	noise	quantity	sincerely	thorough
laid	occasionally	quiet	soldier	though
lead	occur	quit	speech	through
led	occurrence	quite	stopped	to
leisure	off	really	stories	together
library	often	receive	story	too
license	our	recommend	straight	tried
listen	parallel	remember	studying	truly
literature	passed	sandwich	suggest	Tuesday
loose	past	sanitary	suppose	two
lose	period	secretary	sure	until
many	physical	sentence	surely	unusual
meant	picture	Saturday	surprise	usually
minute	piece	says	swimming	vegetable
mischievous	pitcher	scene	taking	very
mystery	pleasant	schedule	than	view
muscle	practice	science	their	vitamin
necessary	prejudice	scissors	then	watch
neighbor	presents	sense	there	weather
niece	principal	sent	they	Wednesday
nineteen	privilege	separate	they're	went
ninety	protein	similar	thought	were
ninth	quality	since	threw	where

COMMONLY USED AND MISSPELLED WORDS

whether	write
which	writer
whole	writing
who's	written
whose	wrote
woman	your
women	you're

Note: Teachers may add to this list.

Teacher Reference: Shefter, Harry, **Six Minutes a Day to Perfect Spelling.**  
Pocket Books, Inc., N Y.

SUPPLEMENT D

A SAMPLE UNIT

Unit: How good health practices help in the prevention and cure of tuberculosis.

Level Seven

Approach: All children were scheduled for X-rays in the X-ray mobile unit early in the school year. Questions were asked about why school activities were interrupted for these X-rays. The unit helped to answer these questions.

Specific Objectives

Organization Outline

To know some symptoms of tuberculosis.

- Problem A.  
What are some symptoms of tuberculosis?
1. Loss of weight
  2. Listlessness
  3. Coughing
  4. Temperature above normal

To know the cause of tuberculosis.

- Problem B.  
What is the cause of tuberculosis?
1. Caused by a germ which attacks:
    - a. Lungs
    - b. Bones
    - c. Glands
  2. Detected by an X-ray

To understand how tuberculosis is spread.

- Problem C.  
How is tuberculosis spread?
1. Sputum
  2. Sneezes
  3. Common drinking cup
  4. Personal contact
  5. Food, especially milk

## A SAMPLE UNIT (Cont'd)

### Suggested Pupil Activities

See the film, **Goodby, Mr. Germ.** Listen to the teacher's introduction of the unit, which will include a brief outline of what it will cover. Read references to find out what the symptoms of tuberculosis are. Some students might interview the school nurse to find out this information. Make oral reports on information found.

Arrange for the school nurse to come in and talk about the cause of tuberculosis. Watch her show the kinds of X-rays, which detect the presence of tuberculosis. See the film-strip, **T. B.---What It Is and What To Do About it.**

Ask each other questions about the film-strip. Begin a word list of new words and their definitions.

Add to this list through the entire unit.

Read assignments. Have informal discussions on the problem. Make posters on how tuberculosis is spread. Visit a dairy to learn about pasteurization and the tuberculin test for cows. Evaluate the field trip.

### Materials of Instruction

Booklet from National Tuberculosis Association, **Tuberculosis, Facts in Picture Language.**

Film: **Goodbye, Mr. Germ.**

Brandwein, Paul F. and others, **You and Science.** Harcourt, Brace and Co., Chicago, 1955, p. 113.

Carroll, Franklin B., **Understanding Our World.** The John Winston Co., Dallas, 1952, p. 234.

Booklet, National Tuberculosis Association, **What You Need to Know About T. B.**

Film: **This Is T. B.**

Brandwein, Paul F. and others, **You and Science.** Harcourt, Bruce and Co., Chicago, 1955, p. 106.

Leaflet by Metropolitan Life Insurance Co., **Tuberculosis.**

Shacter, Helen and others, **You're Growing Up.** Scott, Foresman and Co., Dallas, 1950, p. 177.

## A SAMPLE UNIT (Cont'd)

### Specific Objectives

To understand why tuberculosis is dangerous.

To learn how tuberculosis is cured or arrested.

To understand how tuberculosis can be prevented.

### Organization Outline

Problem D.

Why is tuberculosis dangerous?

1. Symptoms are similar to other diseases.
2. Children are susceptible to it.
3. One may have it for some time before it is detected.

Problem E.

How is tuberculosis cured or arrested?

1. Medical treatment
2. Proper food
3. Rest

Problem F.

How can tuberculosis be prevented?

1. Good sanitation
2. Keep healthy
3. Avoiding contact with people suffering from tuberculosis
4. Education of the public concerning tuberculosis



## A SAMPLE UNIT (Cont'd)

### Suggested Pupil Activities

See the filmstrips, **T. B. Facts** and **Edward Livingston and the Crusade Against Tuberculosis**.

Continue reading the assignments on tuberculosis.

After a class discussion give examples of friends or classmates who have suddenly had to go to the sanatorium for tuberculosis treatment.

Read assignments. Conduct a panel discussion on the cause and cure of tuberculosis. Write letters, make cartoons and scrapbooks or write a classroom newspaper to send to friends or classmates in a sanatorium or hospital.

See the film, **Trail to Health**.

Carry on a class discussion on how tuberculosis can be prevented.

See the film, **Tuberculosis**, as a review and summary of the unit. Discuss the picture and clear up any points or questions. Take the mastery test and evaluate what has been learned.

### Materials of Instruction

Carroll, Franklin B., **Understanding Our Environment**. The John Winston Co., Dallas, 1952, pp. 202-204.

Film strips: **T. B. Facts**.

**Edward Livingston and the Crusade Against Tuberculosis**.

Brandwein, Paul F. and others, **You and Science**. Harcourt, Brace and Co., Chicago, 1955, pp. 113-114.

Shacter, Helen and others, **You're Growing Up**. Scott, Foresman and Co., Dallas, 1950, p. 182.

Booklet, National Tuberculosis Association, **How To Kill T. B. Germs**.

Filmstrip: **T. B.—What It Is and What To About it**.

Shacter, Helen and others, **You're Growing Up**. Scott, Foresman and Co., Dallas, 1950, p. 183.

Films: **Trail to Health**  
**Tuberculosis**

## SUGGESTED MASTERY TEST

Answer **True** or **False**:

- \_\_\_\_\_ 1. Tuberculosis is inherited.
- \_\_\_\_\_ 2. X-ray mobile units take very small X-ray pictures.
- \_\_\_\_\_ 3. Loss of weight is always a sign of tuberculosis.
- \_\_\_\_\_ 4. Lungs are more often attacked by the tuberculosis germ than are other parts of the body.
- \_\_\_\_\_ 5. The school nurse can help one arrange for an examination for tuberculosis.

## A SAMPLE UNIT (Cont'd)

- \_\_\_\_\_ 6. Tuberculosis can always be cured.
- \_\_\_\_\_ 7. The tuberculin test is given to dairy cows.
- \_\_\_\_\_ 8. Money from the sale of tuberculosis Christmas seals is used to fight the spread of tuberculosis.
- \_\_\_\_\_ 9. Sunshine kills all tuberculosis germs.
- \_\_\_\_\_ 10. Tuberculosis patients go to a sanatorium for treatment.

### Matching:

- |   |                 |
|---|-----------------|
| _____ A disease spread from one to another    | 1. streptomycin |
| _____ A test given to detect tuberculosis     | 2. germs        |
| _____ Bacteria and microbes are often called  | 3. aspirin      |
| _____ Signs of a disease                      | 4. tuberculin   |
| _____ Drug used to help the body combat germs | 5. contagious   |
|   | 6. symptoms     |
|   | 7. negative     |
|   | 8. pulmonary    |

### Multiple choice:

1. A person with tuberculosis has
  - \_\_\_\_\_ a. a positive reaction to the tuberculosis test.
  - \_\_\_\_\_ b. many headaches.
  - \_\_\_\_\_ c. negative reaction to the tuberculosis test.
  - \_\_\_\_\_ d. difficulty in breathing.
2. Pasteurization of milk means to
  - \_\_\_\_\_ a. boil milk.
  - \_\_\_\_\_ b. heat milk to a temperature of about 145° F.
  - \_\_\_\_\_ c. can milk in tin.
  - \_\_\_\_\_ d. cool milk to the freezing point.

### A SAMPLE UNIT (Cont'd)

3. Tuberculosis is dangerous because
- a. we all have it.
  - b. children have it.
  - c. it is difficult to cure.
  - d. Indian people get it.
4. A good cure for tuberculosis is
- a. to eat a lot of food.
  - d. to eat proper food.
  - c. to spend all day outside.
  - d. to drink a lot of water.
5. The tuberculosis germ may be found in
- a. pasteurized milk.
  - b. bread.
  - c. raw milk.
  - d. coffee.
6. A symptom of tuberculosis is
- a. over-weight.
  - b. listlessness.
  - c. healthy appearance.
  - d. subnormal temperature.
7. When tuberculosis patients have visitors they should
- a. share drinking cups.
  - b. turn aside when coughing.
  - c. use a tissue instead of handkerchief.
  - d. wear a mask.

## A SAMPLE UNIT (Cont'd)

8. An arrested tuberculosis patient can select proper food by
- a. asking the grocery man.
  - b. using the basic seven food chart.
  - c. reading books about food.
  - d. watching his neighbor.
9. A tuberculosis patient needs to
- a. have definite rest periods.
  - b. read many books.
  - c. talk much with his friends.
  - d. take walks in the sunshine.
10. Chest X-ray examinations
- a. are given in every school.
  - b. are paid for by each patient.
  - c. should be given in the spring.
  - d. help in the fight against tuberculosis.

## **G O A L S**

### **LEVELS SEVEN, EIGHT, AND NINE**

#### **CIVIC RESPONSIBILITIES**



## SUGGESTED REFERENCES

1. Cleora C. Helbing, **Minimum Essential Goals for Everyday Living in Indian Schools.** Goals 24-29. Bureau of Indian Affairs, Department of the Interior, Washington, D. C., 1952. (This title is temporarily out of print. Copies should be on file in most Bureau school libraries. Copies are also available in many State University Libraries or may be obtained on inter-library loan from the Department of the Interior Library, Washington 25, D. C.)
2. McDowell, Nancy E., **Your Club Handbook.** Life Adjustment Booklet, S. R. A.,\* Chicago, 1953.
3. **Everyday Living.** Goal 49.
4. **Everyday Living.** Goal 49.
5. **Everyday Living.** Goals 45-46.  
**About Growing Up.** National Forum, Inc., Chicago, 1949.
6. **Everyday Living.** Goal 38.
7. Landis and Landis, **Building Your Life.** Prentice-Hall, Inc., N. Y., 1954, pp. 133-145.

---

\* Science Research Associates, 57 W. Grand Avenue, Chicago.

1. Participates in house, building, home room, or classroom organizations.	The student makes his contribution in accordance with prescribed rules of order and plans to carry on constructive activities with other members of the group.
2. Participates in student council affairs.	The student council should include delegates from the seventh level. These students will participate in council affairs and carry the organization's policy back to their groups.
3. Takes active part in planning and conducting a school election of officers.	The class may visit the polls and see a real community election in action. They may also participate in a mock election before the school election. In the school election the class may take charge of some of the following activities: registration, preparation of the ballots, checking registration, being responsible for the ballot box, etc.
4. Plans with teacher and other members of the group, and carries out under supervision activities for school and campus improvement.	The student should see the importance of his group's place in the whole school organization. The activities for campus improvement in which he may participate will be varied and differ with the area and the type of school. The group may set out trees, make signs, paint, and redecorate, etc.
5. Takes pride in his school and its accomplishments.	Each child needs to develop a sense of pride and a desire to assist freely with group activities, knowing the praise and glory will be for the school as a whole, with no particular individual acknowledgment. Learns to be eager and willing to assist in such activities as keeping the classroom and school building clean and attractive. Knows that much more can be accomplished through group cooperation than by individual assignments.
6. Knows the dangers of electrical equipment.	The student should be fully aware that electricity is very dangerous if improperly used. He should disconnect his iron. He should be careful never to touch exposed wires. Electrical Christmas decorations should be set up only under adult supervision.
7. Recognizes the importance of regular attendance.	A student should feel a keen sense of need for regular attendance because of the realization

## SUGGESTED REFERENCES

8. **Everyday Living.** Goal 21.

9. **Everyday Living.** Goal 7.

10. **Everyday Living.** Goals 18-19.  
Shacter, Helen and others, **You're Growing Up.** Scott, Foresman and Co.,  
Chicago, pp. 158-163, 170.

11. **Everyday Living.** Goal 49.

13. **Everyday Living.** Goal 49.  
Aker, Homer Ferris, and Aker, Vanza Nielsen, **You and Your Govern-  
ment.** Harr Wagner Pub., Co., San Francisco, 1948.

- |   |   |
|---|---|
| 7. (Cont'd)   | that he misses something worthwhile and needful to his personal welfare. If he misses a class he must do make-up work for that day. In his clubs and activities he loses his place in the line of progress. He must realize that once he gets behind he must give up leisure time activities to catch up.                           |
| 8. Recognizes the importance of being on time.  | An individual may affect group action. He should learn to be on time because he wants to cooperate and also because he realizes that it is a good mark in his favor. Committees like other groups do not function best until all are present. Schedules should allow sufficient time for students to get where they belong on time. |
| 9. Plans with the help of an adult and carries to conclusion, units of work or projects of work that extend over several days or weeks. | At this level he is extending his ability to plan over a long period of time and in more complex situations; for example: A unit on the importance of good food in respect to good health. Keeps charts up to date which carry over extensive periods.  |
| 10. Serves on committees that gather information which contributes to common group problems.  | The pupil becomes a team worker. He recognizes and accepts his responsibility to contribute to the solution of the problems assigned to the committee. His personal opinions, wishes, and actions are important only to the extent that they contribute to the success of the committee's efforts.                                  |
| 11. Participates with Junior Red Cross or other organizations for community improvement.  | In cooperating with large civic groups he has a feeling of being a part of a larger organization: local, national, and international. He may become a member, contribute money, take part in a project, exchange gifts, or help make an exhibit.  |
| 12. Knows the local pattern of tribal government.   | The student should know how the leader and the members of his tribal organization are elected and their responsibilities. He should know the names of his own representatives.  |
| 13. Knows the functions of local officials and the services they render.  | These officials will vary with places and schools. It may be the policeman, the highway patrolman, the health officials, county-elected officials, or any others he may contact. The main idea of this  |

## SUGGESTED REFERENCES

14. Seashore, Robert H., and Van Dusen, A. C. **How To Solve Your Problems.** S. R. A., 1950.
15. Goslin, Ryllis, and Goslin, Oscar, **Democracy.** Harcourt, Brace and Co., Inc., N. Y., 1940, pp. 19-23.
16. Wight, Edgar L., **Classroom Activities Relating to Natural Resources.** Bureau of Indian Affairs. Department of the Interior, Washington, D. C.
17. **Everyday Living.** Goals 38-47.
18. **Everyday Living.** Goal 43.



13. (Cont'd)

goal is to develop the child's realization that these people are his friends. It is good to have these officials visit the class and talk about their work.
14. Responds to group criticism in ways conducive to group progress.

The group should discuss and formulate standards of achievement. If any individual's work in the group does not come up to par, he must be made to feel that the criticism given is not personal but for improvement of the work done by the group. One member of the cast can make a play inferior. In like manner, the same attitude should be developed toward criticism of the group.
15. Makes others feel accepted in his group.

He should be willing to team up with other members of the group. He may share a work detail, a dance, or work on an academic assignment with any member of the group.
16. Understands that man is influenced by the conditions under which he lives or has lived in the past. (Local or community.)

The class should select a local condition which greatly influences the daily lives of the people in the area and make an intensive study. For example, it could be the shortage of water in the Southwest and the ways in which people must adapt themselves to this condition.
17. Extends his respect for equipment.

Expensive pieces of equipment are to be found in most schools. Perhaps it may be demonstrated what happens when a movie projector or electric polisher is out of order. If abused, some pieces of equipment can never be made as useful or attractive as they were originally.
18. Develops pride and appreciation in making things beautiful in everyday living.

The student may make use of whatever he finds in his locality to beautify his classroom or dormitory.

Boys may visit the girls' dormitory and vice versa; there may be intervisitation among the classrooms; and occasional open house should be held to develop pride in the student in the way he keeps his school quarters. Field trips to other schools may be helpful.

## SUGGESTED REFERENCES

19. Robinson, Clark, **Making the Most of School and Life.** The Macmillan Co., N. Y., 1952.  
Bacmeister, Rhoda W., **Your Children's Manners.** Life Adjustment Booklet, S. R. A., Chicago, 1952.
20. Menninger, Wm. C., **Let's Be Friends.** Junior Life Adjustment Series, S. R. A., Chicago, 1953.  
**Everyday Living.** Goal 19.  
Landis and Landis, **Building Your Life.** Prentice-Hall, Inc., N. Y., 1954, pp. 49-62.  
**About Growing Up.** National Forum Inc., Chicago, 1949.
21. **Everyday Living.** Goal 23.  
Jenkins, Gladys Gardner, and others, **Teen-agers.** Scott, Foresman and Co., Chicago, pp. 64-118.  
Shacter, Helen, **Getting Along With Others.** Life Adjustment booklet, S. R. A., Chicago, 1949.  
\*Film: **Dinner Party**
22. Bureau of Indian Affairs, **Dormitory Recreation Equipment Indoor and Outdoor.** Department of the Interior, Washington, D. C., 1955.  
Bancroft, Jessie H., **Games.** The Macmillan Co., N. Y., 1937, pp. 269-324.  
Lawson, Arthur H., **Homemade Games.** J. B. Lippincott, Philadelphia, 1934.  
Harbin, E. O., **The Fun Encyclopedia.** Abingdon-Cokesbury Press, N. Y., 1940.
23. **Everyday Living.** Goal 23.  
Jenkins, Gladys Gardner and others, **Teen-agers.** Scott, Foresman and Co., Chicago, pp. 64-118.  
Shacter, Helen, and Bauer, W. W., **You and Others.** Scott, Foresman and Co., Chicago, 1949, pp. 64-69.
24. Shacter, Helen, **Into Your Teens.** Scott, Foresman and Co., Chicago, 1951, pp. 210-226.

---

\*Note: All visual aids listed may be obtained from the Service-Wide Library, P. O. Box 345, Brigham City, Utah.

19. Realizes that having an interest in others is a way to make friends.

The teacher may make a survey of the individual interests of the group. She may then place those with similar interests together. For an assignment students may make character sketches of each other. Will Rogers, or other men who made friends easily and were interested in people, may be studied.

20. Realizes the desirability of having many friends.

Understands how having many friends helps to develop a good personality and a broader interest in many people, enabling him to have more social contacts. Help him to see the value of thinking clearly and fairly in his associations with his classmates and other associates.

21. Uses proper manners while with the opposite sex; uses common courtesies at dances and parties.

Students at this age are eager to learn how to act properly around the opposite sex. Phases of this teaching should be done in classrooms, dormitories, and home economics departments. In the classroom students may hand in questions they want answered. Answers may be dramatized. Class parties and exchange visits with other schools give children a chance to use what they have learned.

22. Learns a variety of quiet games either at home or at school.

Each member of the group finds a quiet game he likes and thinks his group might like. He should study the game in order that he may present it to the other members of his group. Booklets may be kept with directions for playing the games they like the best. Each child may be informed of his privilege to keep the book for future home use. Checkers, scrabble, monopoly, dominoes, and skunk are samples that may be used.

23. Participates in dance parties.

Boys and girls want to associate with each other, but need encouragement before they will participate in some forms of dancing. They like the physical activity and rhythmic action of folk and square dances.

24. Learns to enjoy physical activity commensurate with his ability.

A student should learn the assets and liabilities connected with physical activity. He should understand that time and atmospheric conditions bear consideration in all his physical activities. He should also learn to discipline himself as to how long to play and what types of games he can not participate in because of his own personal health condition.

## SUGGESTED REFERENCES

25. **Everyday Living.** Goal 18.  
Hertz, Barbara Valentine, **Where Are Your Manners?** Life Adjustment Booklet, S. R. A., Chicago.
26. **Everyday Living.** Goal 18.  
Hertz, Barbara Valentine, **Where Are Your Manners?** Life Adjustment Booklet, S. R. A., Chicago.
27. Robinson, Clark, **Making the Most of School and Life.** The Macmillan Co., N. Y., 1952, pp. 218-220.
28. **Everyday Living.** Goal 19.
29. Bacmeister, Rhoda W., **Your Children's Manners.** Life Adjustment Booklet, S. R. A., Chicago. 1952.  
Shacter, Helen, **Into Your Teens.** Scott, Foresman and Co., Chicago, 1951, pp. 41-61.
30. McKown, Harry C., **Home Room Guidance.** McGraw-Hill Book Co., Inc., Chicago, 1946, pp. 291-295.
31. Ruff, Edna M., **High, Lo—Together Go.** Hall and McCreary, 1953, pp. 1-79.  
**Everyday Living.** Goal 22.
32. Luther, Frank, **Americans and Their Songs.** Harper and Bros., N. Y., 1942.



25. Expresses appreciation by making definite statements.	Students should make the usual polite responses, both oral and written, without being prompted.
26. Learns how to express sympathetic feeling for others who experience sadness or trouble.	Students may send appropriate cards or letters as a class activity. They may, as a group or as individuals, do a kind, thoughtful act to show sympathy for someone.
27. Analyzes his own actions in order to prevent discredit to himself or his family.	Have discussions on actions that reflect credit and are pleasing to their families. When thoughtless actions occur they should be discussed in a constructive way, either with the group or individually.
28. Accepts blame when he is at fault.	This is another concept of honesty. The student should be mature enough to realize that many times he needs to report his own failure so that something can be done about it. He should share in correcting his own faults.
29. Realizes he must do his own work.	This is another concept of honesty. The student should realize that in order to learn he must do his own assignments and that copying from a neighbor can be a definite disadvantage.
30. Reports to the group, behavior which he considers detrimental to the common good.	This does not mean being a tattler. This means reporting to the group important things that the group should know about, should consider, and upon which they should take constructive action.
31. Takes part in the singing of school songs.	He should know and try to sing all the school songs so that he can participate wholeheartedly in school assemblies and athletic events.
32. Develops an understanding of good music.	Listens to good selections. Learns appreciation through the study of the lives of composers and the stories which prompted them to compose that particular selection. Includes ballads, semi-classicals, spirituals, patriotic selections and sacred songs.



## SUGGESTED REFERENCES

33. Bettelheim, Bruno, **Overcoming Prejudice**. Life Adjustment Booklet, S. R. A., Chicago.  
**Everyday Living**. Goal 49.
34. Barrows, Harlan H., and Parker, Edith Putnam, **The American Continents**. Silver Burdett Co., Dallas, 1954.  
Meyer, J. G., and others, **Our Southern Neighbors**. Follett Pub. Co., Chicago.  
Meyer, J. G., and others, **Our American Neighbors**. Follett Pub. Co., Chicago.
35. Carls, Norman, and others, **Neighbors in Latin America**. John C. Winston Co., Chicago.
36. Atwood, Wallace W., and Thomas, Helen Goss, **The American Nations**. Ginn and Co., Chicago, pp. 269-381.
37. Carls, Norman, and Sorenson, Frank E., **Neighbors in Latin America**. John C. Winston Co., Chicago. Unit I pp. 1-16.
38. Townsend, Herbert, **Our America**. Allyn and Bacon, Chicago, 1953, pp. 127-152.  
Wilder, Howard B., **This Is America's Story**. Houghton Mifflin Co., Chicago, 1948, pp. 359-403.

33. Accepts an individual as a member of his group, regardless of race or culture.	He has been taught earlier to respect racial custom. Now he should begin to regard a member of another culture for what he is and what he can do. He should be willing to mix socially and assume his share of the entertaining.
34. Learns something about the everyday living of other people in the Western hemisphere.	Is able to make a comparison in respect to home life, foods, religious beliefs, education, recreation and cultural background. Learns how climatic conditions affect their habitat. Understands the relationship of culture and religion.
35. Learns the chief resources and industries of the Western hemisphere.	List the chief natural resources that are important to us. Find out in which countries they are located. Make a pictorial map showing the location of the major industries. Learn how the geographical factors influence the industrial development. Find out what products each country imports.
36. Understands the basic differences between our government and the governments of our neighbors.	By the use of a large wall map locate the capital of each country with a small flag or a little booklet in the shape of a capitol building. Inside the booklet may be placed information which has been secured through research as to the type of government they maintain.
37. Learns the importance of being friendly with our neighbors to the north and south.	From the study of goals 33, 34, and 35 the child has gained an over-all picture of the Western hemisphere. Stress points of importance concerning peacetime security. Compare reasons for our interdependence where they are concerned.
38. Understands that man is influenced in his thinking by the conditions under which he lives or has lived in the past.	Students may make a study of problems carried over from the North vs. the South conflict in the United States and the problems of industrial and agricultural areas.

## SUGGESTED REFERENCES

39. Letten, Mildred C., and Ries, Adele M., **Clubs Are Fun.** Science Research Associates, Inc., 57 W. Grand Ave., Chicago 10, 1952.  
McDowell, Nancy E., **Your Club Handbook.** S. R. A., 1953.  
Beery, Mary, **Manners Made Easy.** McGraw-Hill Book Co., Inc., N. Y., 1949, pp. 31-48.  
**Everyday Living.** Goals 24-29.
40. Aker, Homer Ferris, and Aker, Vanza Nielsen, **You and Your Government.** Harr Wagner Publishing Company, San Francisco, 1948, pp. 5-24.
41. Newsom and others, **Living and Planning Your Life.** Book 2-Grade 8. Monarch Book Co., Gunnison, Colo., 1948.  
**Everyday Living.** Goals 46-47.
42. Corbin, Dan, **Recreation Leadership.** Prentice-Hall, Inc., N. Y., 1953, pp. 74-83.  
**Everyday Living.** Goal 49.
43. LeCount, Samuel and Hardy, Louis, **How to Study in High School.** (A manual and workbook.) Pacific Books, Box 558, Palo Alto, Calif., 1952.  
Gerkin, C. d'A, **Study Your Way Through School.** S. R. A., 1953.  
Film: **How To Study** 16 mm. 10 minutes
44. Mulac, Margaret E., **The Game Book.** Harper Bros., N. Y.  
Borst, Evelyne, **The Book of Games for Boys and Girls.** A. S. Barnes and Co., 232 Madison Ave., New York 16, 1953.  
Boyd, Neva L., **Home Games.** H. T. FitzSimmons Co., 23 E. Jackson Blvd., Chicago, 1942.  
Corbin, Dan H., **Recreation Leadership.** Prentice-Hall, Inc., 70 Fifth Ave., New York 11, 1953. (teacher)  
Betz, Betty, **The Betty Betz Party Book.** Grosset & Dunlap, N. Y., 1947.  
Mitchell, Viola A., **Softball for Girls.** A. S. Barnes & Co., Inc., N. Y., 1952.  
Mason, Bernard S., **Active Games and Contests.** A. S. Barnes & Co., N. Y., 1935.  
Bureau of Indian Affairs, **Dormitory Recreation Equipment.** Department of the Interior, Washington, D. C., 1955.

39. Extends his participation in home, building, homeroom, or classroom organization.	This is an advanced phase of Goal 1, Level Seven. The student should be able now to follow <b>Robert's Rules of Order</b> in participating or in conducting formal meetings. He should respect the opinions of others and practice courtesy in rejecting their opinions, or in disagreeing with them. He accepts the will of the majority.
40. Participates in student council affairs; understands the limitation of student authority in school affairs.	The council delegates should get a clearly defined conception of their place in school affairs. The teacher may assist the delegates in giving this information to their classmates. Student council members may exchange visits with other schools to share ideas in student government.
41. Assumes leadership and responsibility for campus improvement with a minimum of supervision.	The student has been working with this right along. Now he should be encouraged to make suggestions for group activities and to act as leader of the group in carrying them out. Campus situations are so different that these activities vary from place to place. The group will need to choose those that are suitable.
42. Plans and carries out club projects for community and school betterment.	In Boy and Girl Scout Clubs, 4-H Clubs, and others, the student may work from a school-wide and community standpoint.
43. Plans and budgets time for his daily program of activities.	The student may make a circle graph showing what he does and the portion of time he gives to each activity. Study the distribution and make improvements if any are needed. Plan and give a dramatization for an all-school assembly on how not to study and how to study.
44. Extends his knowledge of games for home and school.	<p>The student will learn various card games such as rook, canasta, rummy, solitaire, and hearts. He should learn indoor games like checkers, Chinese checkers, dominoes, monopoly, Russian bank, pick up sticks, bingo, table pool, spin the bottle, ring on the string, upset the fruit basket, cootie, ping-pong etc.</p> <p>He should learn such outdoor games as baseball, volleyball, badminton, horse-shoes, archery, quoits, croquet, etc.</p>



## SUGGESTED REFERENCES

45. Pierce, Wellington G., **Youth Comes of Age.** McGraw-Hill Book Co., N. Y., 1948, pp. 128-130.  
 Robinson, Clark, **Making the Most of School and Life.** The Macmillan Co., N. Y., 1952.  
 Menninger, William C., **Let's Be Friends.** Junior Life Adjustment Booklet, S. R. A., 1953.  
 Ulman, Frances, **Life With Brothers and Sisters.** Junior Life Adjustment Booklet, S. R. A.
  
46. Allen, Betty, and Briggs, Mitchell Pirie, **Behave Yourself.** J. B. Lippincott Co., Chicago, 1937.  
 Greer, Carlotta C., **Your Home and You.** Allyn and Bacon, Chicago, 1942, pp. 281-296.  
 Filmstrip: **As Others See You**  
                   **Manners at School**  
 Film: **Everyday Courtesy**      16 mm.    10 minutes
  
47. Beery, Mary, **Guide to Good Manners.** Junior Life Adjustment Booklet, S. R. A., 1952.  
 Betz, Betty, **Your Manners Are Showing.** Grosset and Dunlap, N. Y., 1946.  
 Filmstrip: **Public Appearance**
  
48. **Everyday Living.** Goal 23.  
 Beery, Mary, **Manners Made Easy.** McGraw-Hill Book Co., Inc., N. Y., 1949, pp. 161-169.  
 Boykin, Eleanor, **This Way Please.** The Macmillan Co., N. Y., 1949, pp. 192-199.
  
49. **Everyday Living.** Goal 18.  
 Boykin, Eleanor, **This Way Please.** The Macmillan Co., N. Y., 1949, pp. 122, 259, 265.  
 Allen, Betty, and Briggs, Mitchell Pirie, **If You Please.** J. B. Lippencott Co., Chicago, 1950, pp. 70, 104-106, 196.
  
50. Seashore, Robert H., and Van Dusen, A. C., **How To Solve Your Problems.** S. R. A., Chicago, 1950.
  
51. Brown, Howard E., **Your Life in a Democracy.** J. B. Lippincott Co., Chicago, 1944.  
 Jenkins, Gladys Gardner, and others, **Teen-Agers.** Scott, Foresman and Co., Dallas, 1954, pp. 51-54.  
 Films: **Understand Your Emotions**      16 mm.    15 minutes  
           **Effective Criticism**                16 mm.    10 minutes  
           **Act Your Age**                        16 mm.    13 minutes



45. Is friendly with members of his group.	He should be led to appreciate the good qualities and talents of classmates and learn to have a feeling that a successful day is one during which he has many pleasant relationships with others.
46. Knows that good manners are based on thoughtfulness and consideration for others.	When in doubt, how may we decide the right thing to do and say? Relate stories that show that politeness is based on consideration for the feelings of others. Make a list of good manners that should be observed at school, at church, on busses, on the telephone, at parties, and in making introductions. Have students make posters to illustrate etiquette. Have students rate themselves on their own manners.
47. Practices acceptable ways in bringing individuals into conformity with the group.	The activities of the homeroom organization, the student council, or other student clubs should contribute to the achievement of this goal. The student can measure methods that he uses with the standards set up by these organizations.
48. Can act as host or hostess at social gatherings.	Many situations will arise during the year when students will get this experience. The teacher should plan for each student to have this experience. Those who act as hosts or hostesses must plan and prepare for the parties, and be responsible for the entertainment for the guests.
49. Learns how to express appreciation in several ways.	He should learn to repay a treat, write "Thank You" notes and show courtesies to express appreciation for favors done. He should be taught that it is not the money that counts.
50. Analyzes his own actions in order to prevent discredit to his group.	He should be proud of the place his group holds in the school and of his share in making a good class record. This is an extension of Goal 27, Level Seven.
51. Knows acceptable ways of responding to anger.	He must learn not to take seriously the actions or expressed opinions of an angry person. Dramatization is a good way to teach tolerance toward an angry person.

## SUGGESTED REFERENCES

52. **Everyday Living.** Goal 21.  
Allen, Betty, and Briggs, Mitchell Pirie, **If You Please.** J. B. Lippincott Co., Chicago, 1950, pp. 103, 191, 204.
53. **Everyday Living.** Goal 22.  
Huntington, Harriet, **Tune Up.** Doubleday, Doran & Co., Garden City, N. Y., 1942. (Instruments)
54. Kinscella, Hazel Gertrude, **History Sings.** University Pub., Co., N. Y., 1942.  
Pitts, Lilla Belle, **The Music Curriculum in a Changing World.** Silver Burdett Co., Chicago, 1944.  
Pitts, Lilla Belle, **Singing Juniors.** Ginn & Co., Dallas, 1953.  
Pitts, Lilla Belle, **Singing Teen-Agers.** Ginn & Co., Dallas, 1953.  
Spaeth, Sigmund, **The Art of Enjoying Music.** Whittlesey House, N. Y., 1933.
56. Aker, Homer Ferris, and Aker, Vanza Nielsen, **You and Your Government.** Harr Wagner Pub. Co., San Francisco, 1948.
57. Ames, Merlin M., and others, **My America.** Webster Pub. Co., Dallas, 1947, pp. 110-122.  
Films: **Colonial Expansion** 16 mm. 10 minutes  
**Our National Government** 16 mm. 10 minutes  
**Our Declaration of Independence** 16 mm. 20 minutes  
**Our Bill of Rights** 16 mm. 20 minutes
58. Brown, Howard E., **Your Life in a Democracy.** J. B. Lippincott Co., Chicago, 1944, pp. 150-165.

- |  |   |
|--|---|
| 52. Realizes that he must repay what he borrows.   | The student must realize the obligations that go with borrowing. When he borrows he must expect to repay. Failure to meet his obligations will bring discredit to himself. He should realize fully the poor regard that society has for "moochers." |
| 53. Takes part in choral singing or plays a simple instrument.                                       | Each student should have the privilege of some musical experience that will give him a wider knowledge of notes, harmony, etc. Some of the simpler instruments may be harmonicas, ukuleles, etc. See Goal 31, Level Seven.                          |
| 54. Develops an interest in and appreciation for good music.   | Discuss various kinds of music, instrumental and vocal. Listen to music on television, radio, and records. Attend concerts and musical programs. Evaluate the music heard.  |
| 55. Understands how the tribal government serves individuals and the tribe.                          | The student should find the ways the tribal government can serve him, his family, and the entire group that they represent. This should include study of loans, land management, arts and crafts, marketing, law enforcement and welfare.           |
| 56. Knows the pattern of organizations in local (county or city) government.                         | In connection with this study students should visit the county courthouse or city hall, if possible, to get first-hand information. Visits from officials are valuable. Government is set up to protect one's rights and safety.                    |
| 57. Appreciates the soundness of the planning of the founders of the nation.                         | Achievement of this goal will include a study of the constitution, how it came into being, its elastic quality, and what changes have been made. Discusses our fundamental rights and social and economic security.                                 |
| 58. Knows the pattern of State organization of government, and its relationship to local government. | Should know the names of State offices most important to the students. They should realize that the State government is an extension of the local government.   |

## SUGGESTED REFERENCES

59. Aker, Homer Ferris, and Aker, Vanza Nielsen, **You and Your Government.** Harr Wagner Pub. Co., San Francisco, 1948, pp. 333-356.
60. Brown, Howard E., **Your Life in a Democracy.** J. B. Lippincott Co., Chicago, 1944, pp. 152-165.
61. Goslin, Ryllis, and Goslin, Omar, **Democracy.** Harcourt, Brace and Co., Inc., N. Y., 1940, pp. 19-26.
62. Townsend, Herbert, **Our America.** Allyn and Bacon, Chicago, 1953, pp. 30-35.  
Barker, Eugene C., and others, **Story of Our Country.** Row, Peterson and Co., San Francisco, 1948.  
Wilder, Howard B., and others, **This Is America's Story.** Houghton Mifflin Co., Chicago, 1948, pp. 82-83, 88-96.  
Shippen, Katherine B., **Discovery, Exploration, Settlement.** Informative Classroom Picture Publishers, Grand Rapids, Michigan, 1949.
63. Townsend, Herbert, **Our America.** Allyn and Bacon, Chicago, 1953.  
Wilder, Howard B., and others, **This Is America's Story.** Houghton Mifflin Co., Chicago, pp. 334-358.
64. McConnell, W. R., **Geography of American Peoples.** Rand McNally & Co., Chicago, 1951.  
Atwood, Wallace W., **The United States in the Western World.** Ginn & Co., Chicago, 1954.  
Whipple, Gertrude, and James, Preston E., **At Home on Our Earth.** The Macmillan Co., N. Y., 1955.
65. Townsend, Herbert, **Our America.** Allyn and Bacon, Chicago, 1953.

59. Knows the functions of State officials.	Students may follow their activities through newspapers and radio broadcasts in their reading and research.
60. Understands his responsibilities in governmental affairs.	Provide opportunities for student participation in discussion groups; such as, panels, forums, and round tables. Encourage pupils to take the initiative in acting as leader, chairman, or officer.
61. Understands his rights and responsibilities in selecting officials by secret ballot.	The student may study the history of the secret ballot. He may find out what countries use the secret ballot. The secret ballot should be used on all important occasions. He should appreciate the fact that the secret ballot is an inalienable right in a democracy and places the power in the hands of the people.
62. Knows that the early settlers came to America for religious reasons.	This should help develop a religious tolerance. A Thanksgiving play helps to dramatize the story. Many films, stories, poems, and paintings are available.
63. Knows the story of westward expansion in the United States.	Students should make a map study; see films, study the movements of the Indians of the early days in their own area, visit forts, old trails, etc. They may study the effects of the westward expansion on the Indians.
64. Knows how geographical factors have influenced the development of the United States.	Students should record changes of weather daily. Students should make a map showing the topographical features of the United States. They know the relationship of industry to the physical features of the area.
65. Is familiar with the participation of the United States in foreign affairs.	Reads newspapers, <b>Current Events</b> , <b>Junior Scholastic</b> , <b>Read magazine</b> , and other publications. The teacher should set aside a short period each day to discuss world events. Evaluate how these events affect us.



## SUGGESTED REFERENCES

66. Robinson, Clark, **Making the Most of School and Life.** The Macmillan Co., N. Y., 1952, pp. 247-263.
  
67. Glendining, Marion, **Teen Talk.** Alfred A. Knopf, N. Y., 1951, pp. 99-112.  
 Diamond, Stanley E., **Citizenship for Boys and Girls.** Junior Life Adjustment Pamphlet. S. R. A., 1953.  
**Everyday Living.** Goal 49.
  
68. Robinson, Clark, **Making the Most of School and Life.** The Macmillan Co., N. Y., 1952, pp. 386-387.
  
69. **Everyday Living.** Goal 18.  
 Neugarten, Bernice L., and Misner, Paul J., **Getting Along in School.** Junior Life Adjustment Pamphlet. S. R. A., 1951.
  
70. Belmarr, and others, **About Growing Up.** National Forum Inc., Chicago, 1949, pp. 189-95.  
 Zarchy, Harry, **Creative Hobbies.** Alfred A. Knopf Co., N. Y., 1953.  
 Zarchy, Harry, **Here's Your Hobby.** Alfred A. Knopf Co., N. Y., 1950.  
 Members of the League of New Hampshire Arts and Crafts, **Handbook of Crafts.** Arco Publishing Co., N. Y., 1954.  
 Griswold, Lester, **Handicraft.** Prentice-Hall, Inc., N. Y., 1951.  
**Occupational Handicrafts.** Charles A. Bennett Co., Inc., Peoria, Ill.  
 Elliott, Bruce, **Classic Secrets of Magic.** Harper Bros., N. Y., 1953.  
 Robbins, David, **Practical Magic.** Greenberg Co., N. Y., 1953.
  
71. Lawson, Arthur H., **Homemade Games.** J. B. Lippincott Co., Philadelphia, 1934.  
 Bancroft, Jessie H., **Games.** The Macmillan Co., N. Y., 1954.
  
72. **Time** magazine  
**Newsweek** magazine  
**Scholastic** magazine  
**Parents'** magazine  
 Witty, Paul, and Bricker, Harry, **Your Child and Radio, TV, Comics and Movies,** Better Living Booklet. S. R. A., 1952.
  
73. **Outdoor Life** magazine. Popular Science Pub. Co., Inc., 353 Fourth Ave., New York 10, N. Y.  
 Gallegher, J. Roswell, M. D., **You and Your Health.** Life Adjustment Series. S. R. A., 1950, p. 22.

GOAL	LEVEL NINE	SUGGESTED ACTIVITIES AND TECHNIQUES
66.	Extends his participation in home, building, home-room or classroom organization.	At this level the student is mature enough to act as leader, to evaluate the qualifications of candidates and select leaders on the basis of their qualifications. See Goal 39, Level Eight.
67.	Extends his participation in student council affairs.	The students can organize such projects with a student leader and carry them out with student supervision. See Goal 41, Level Eight.
68.	Extends his participation in campus clean-up and improvement.	The student should understand the organization and functions of the by-laws and constitution of his student council. He should assume the responsibility for selecting well-qualified student officers. See Goal 40, Level Eight.
69.	Budgets his free time.	This is an extension of Goal 42, Level Eight. He may plan in a similar manner the time that he has to himself. He should check the time that he spends with other people, in study, by himself, in personal grooming, in play, and evaluate the distribution.
70.	Extends his interest in hobbies independently of school supervision.	Buys and enjoys good records. Practices at home such crafts as sewing, painting, beadwork, leathercraft, raising pets, making collections, carving, sculpturing magic tricks or photography. Makes talks about and gives demonstrations of his hobby before school groups.
71.	Extends his interest in sports and other desirable physical activities.	During his leisure time he enjoys by himself, or with others, horse-shoes, tennis, table tennis, badminton, shuffleboard, softball, archery, shooting goals, hiking, soccer, horseback riding, fishing, hunting, or camping.
72.	Chooses worthwhile movies, TV and radio programs.	Makes a critical report on a movie, a TV or radio program.  Reads reviews of movies from periodicals, such as <b>Newsweek, Scholastic, Parents' Magazine.</b>  Enjoys outstanding productions recommended by the teacher or his classmates.
73.	Seeks contact with nature and finds refreshment.	Takes field trips in science class. Makes sketches from nature. Collects specimens, such as fossils,

SUGGESTED REFERENCES

74. Films:   **Responsibility**                   16 mm.   14 minutes  
              **The Procrastinator**           16 mm.   10 minutes

75.

76.

77. Film:   **High School:**               16 mm.   15 minutes  
              **Your Challenge**

78. Goslin, Ryllis, and Goslin, Omar,   **Democracy.**   Harcourt, Brace and Co.,  
      Inc., N. Y.,   1940, p. 26.

79. **Everyday Living.**   Goal 19.

80. **Everyday Living.**   Goal 19.  
      Film:   **How Do You Do**           16 mm.   15 minutes  
      Rosenheim, Lucile, **Let's Give a Party.**   Junior Adjustment Pamphlet.  
      S. R. A., 1953.

73. (Cont'd)      rocks, leaves, butterflies, and other insects, birds' eggs. Takes pictures.
74. Carries out individual units of work that extend over several days or weeks.      This is an extension of Goal 9, Level Seven, where he had the help of an adult. He should now have enough maturity to work on his own.
75. Brings to class all personal materials needed (books, pencils, outside assignments, etc.).      This goal points up what is usually an individual problem. Since the ninth grade is usually departmentalized, the student moves from one classroom to another and has trouble keeping all materials with him.
76. Does his share in classroom activities.      Volunteers comments freely in class discussions. Is active in work of small groups within the class. Finds himself in classroom situations in which he must contribute or bring failure to the group. This can be achieved through plays, panel discussions, exhibits, informal dramatizations and student-conducted classes.
77. Knows what is meant by a unit of credit and the requirements for graduation.      Has a conference with his adviser to plan his high school course.
78. Understands the importance of respecting constituted authority.      The person in authority is acting as a protector to the child, and cooperating with the authority has many compensations. There should be no element of fear. Confidence will be built up through close, friendly contact. Fire drills and traffic regulations teach that unquestioned response to authority is for the child's own safety.
79. Responds to personal criticism or rejection in ways conducive to personality growth.      The student should have maturity enough to realize what he has done to merit criticism or rejection. Then he can try to find more acceptable ways of behavior. He will need to try to understand the other fellow. Much personal guidance will be needed.
80. Takes responsibility for entertaining guests at social functions.      The class or homeroom may plan informal social situations to which guests are invited.

SUGGESTED REFERENCES

81. Goldberger, I. H., and Hallock, Grace T., **Understanding Health.** Ginn and Co., Boston, 1950, pp. 233-238.  
**Everyday Living.** Goals 18, 19.

82. a. and b. **Everyday Living.** Goal 19.  
Landis, Judson T., and Landis, Mary, **Building Your Life.** Prentice-Hall, Inc., N. Y., 1954.

83. **Everyday Living.** Goal 18.  
Films: **Everyday Courtesy** 16 mm. 10 minutes  
**Social Courtesy** 16 mm. 10 minutes

84. **Everyday Living.** Goal 19.  
Shacter, Helen, **Into Your Teens.** Scott, Foresman Co., Chicago, 1951.

85. **Everyday Living.** Goal 19.  
Clark, Thaddeus B., **What Is Honesty?** Life Adjustment Booklet. S. R. A., 1952.  
Film: **How Honest Are You?** 16 mm. 10 minutes  
Dike, Helen, **Stories from the Great Metropolitan Operas.** Random House, N. Y., 1943.

86. **Everyday Living.** Goal 22.  
Film: **Choral Music** 16 mm. 10 minutes



81. Carries his share of responsibility in serving as host to school visitors.	The student should realize the importance of good public relations and that, in extending courtesies to visitors, he can have a direct part in establishing them. He should speak first to a stranger, offer to guide him wherever he wishes to go and introduce him to persons on the campus. If students know in advance that groups or individuals are coming, they should help to plan appropriate entertainment and later help to carry out the plans.
82. a. Knows how to express disagreement with adults in satisfactory ways.	He should learn to give his views in a courteous way with a polite form of introduction, so that he may receive a better reception. He may learn forms of address such as, "Pardon me, but . . ." or "May I express my opinion?"
b. Continues to develop courage and ability to oppose the group on issues.	The student should grow in understanding that leaders of all societies frequently need to take a stand that may be very unpopular with the group. He should learn that one of the responsibilities of leadership is to present in clear and understandable terms convincing arguments for the stand he is supporting and to persuade the group to join him. The teacher should assist the class in analyzing stands that have been taken by individuals of the class and in civic life on popular issues and to evaluate the proponent's responsibilities and situations.
83. Extends his ability to express appreciation in several different ways for things that are done for him.	See Goal 49, Level Eight.
84. Analyzes his own actions in order to prevent discredit to his school.	This is an extension of Goal 24, Level Seven, and Goal 50, Level Eight. This goal develops loyalty to the school.
85. Chooses the truth vs. untruth in situations where a choice is necessary.	This is a more mature concept of honesty. The student should realize that he constantly meets truth and untruth. He must learn to recognize a fallacy and realize the value of truth.
86. Extends his musical interest.	The student may go into more advanced training in music. Even though he does not actively take part, he should grow in appreciation. See Goal 53, Level Eight.

SUGGESTED REFERENCES

87. **Your Reading** (Book List). National Council of Teachers of English, 704 S. Sixth St., Champaign, Ill., 1954, pp. 85-94.

88. Wilson, Howard E., and Lamb, Wallace E., **American History**. American Book Co., Chicago, 1947, pp. 513-527.  
Ames, Merlin M., Ames, Jesse H., and Staples, Thomas S., **My America**. Webster Pub. Co , Los Angeles, 1947, pp. 475-484.  
Film: **We, The Peoples** 16 mm. 9 minutes

89. Barnes, Marcillene, and Anthony, Barbara K., **Voyage and Discovery**. Informative Classroom Picture Pub., Grand Rapids, Michigan, 1941.  
Films: **The Middle States** 16 mm. 10 minutes  
**Industrial Revolution** 16 mm. 10 minutes  
**Northwestern States** 16 mm. 10 minutes

- |  |   |
|--|---|
| 87. Has interest in fiction reading that helps him to understand other peoples.  | The teacher should encourage students to read stories that have settings in other countries and picture the lives of the characters in different backgrounds. Many of the adventure stories are of this nature and are eagerly read if they are on the proper level.  |
| 88. Understands why the United Nations was founded.  | In connection with this study the class may dramatize scenes in history showing peaceable settlement of differences by negotiations, see films on the United Nations, and collect flags. The class may study the work that the United States has done toward promoting world peace prior to the founding of the U. N. |
| 89. Understands that people of the world are influenced in their thinking by the conditions under which they live or have lived in the past. | The student should be reading a good current events magazine or paper that covers the United Nations and conditions in other countries.   |



## **G O A L S**

### **LEVELS SEVEN, EIGHT, AND NINE**

#### **COMMAND OF FUNDAMENTAL PROCESSES**

#### **ARITHMETIC**



## SUGGESTED REFERENCES

1.   \***Row-Peterson Arithmetic**, Book 7. 1952, pp. 42-49.  
     \*\***Making Sure of Arithmetic**, Book 7.     pp. 118-121.  
     Carpenter, Dale, and Cuthberton, Elizabeth, **The World of Numbers.**  
     Arithmetic 7. The Macmillan Co., 1950, N. Y., pp. 61-64.  
     Film: **We Discover Fractions.**
  
2.   **Row-Peterson Arithmetic**, Book 7. 1952, pp. 97-99.  
     **Making Sure of Arithmetic**, Book 7. 1952, pp. 155-160.
  
3.   **Row-Peterson Arithmetic**, Book 7. 1952, pp. 103-104.  
     **Making Sure of Arithmetic**, Book 7. 1952, pp. 130-131.  
     Carpenter, Dale, and Cuthberton, Elizabeth, **The World of Numbers.**  
     Arithmetic 7. The Macmillan Co., N. Y., 1950.  
     Film: **Decimals Are Easy**           16 mm           10 minutes
  
4.   **Making Sure of Arithmetic**, Book 7. 1952, pp. 139-149.  
     **Row-Peterson Arithmetic**, Book 7. 1952, pp. 105-116.

---

\*Wheat, Harry Grove, and others, Row, Peterson and Co., Evanston, Illinois, 1952.

\*\*Morton, Robert Lee, Silver Burdett Co., Chicago, 1952.

1. Divides fractions:
  - a. Fractions by fractions.
  - b. Whole numbers by fractions.
  - c. Mixed numbers by fractions.
  - d. Mixed numbers by mixed numbers.

In Level Six, the child should have acquired a good understanding of fractions. He should use fractions in everyday situations. Provide sufficient practice to make the process automatic. Pupils will need to understand clearly that to divide by a fraction, invert the divisor and multiply.

2. Understands the relationship of fractions and decimal fractions.

Approach the study of decimal fractions through the medium of related common fractions. Teach that decimal fractions are common fractions whose denominators are 10, 100, 1000, or some power of 10 greater than 0.

3. Adds and subtracts decimal fractions.

Teach pupils to keep the decimal points in a straight column and to write tenths under tenths, hundredths under hundredths, etc., as well as to write units under units, tens under tens, etc.

In subtraction, show by example that if the number of places in the subtrahend is greater than the number of decimal places in the minuend we must begin by subtracting from an imagined zero. The blank spaces may need to be filled in with zeros until the pupil becomes more proficient and can do without such visual aids.

Example:      
$$\begin{array}{r} 62.4 \\ -13.291 \\ \hline \end{array}$$
      or      
$$\begin{array}{r} 62.400 \\ -13.291 \\ \hline \end{array}$$

Show by example the analogy in adding and subtracting decimals to common fractions; for example:  $1/10$  plus  $3/10$  equals  $4/10$ ; or  $.1$  plus  $.3$  equals  $.4$ ; and  $8/10$  minus  $5/10$  equals  $3/10$ ; or  $.8$  minus  $.5$  equals  $.3$ .

4. Multiplies and divides decimal fractions.

(a) **Multiplication of decimal fractions.** Use enough illustrative examples to show the pupil that when a decimal is multiplied by a decimal, the number of decimal places in the product is equal to the number in the multiplicend plus the number in the multiplier. Approach this through the medium of common fractions. A decimal example is stated and then solved as in common fractions.

Example:  $.23$  times  $.7$  equals  $7/10$  times  $23/100$  equals  $161/100$  or  $.161$ .

(b) **Division of fractions.**

Use enough illustrative examples to show the pupils that division of decimals is similar to division of whole numbers. Make clear the fact that when we divide decimals the number of decimal places

SUGGESTED REFERENCES

5. **Row-Peterson Arithmetic**, Book 7. 1952, pp. 120-128.  
**Making Sure of Arithmetic**, Book 7. 1952, pp. 190-241.  
Film: **Meaning of Percentage** 16 mm 10 minutes

6. **Row-Peterson Arithmetic**, Book 7. 1952, pp. 130-135.  
**Making Sure of Arithmetic**, Book 7. 1952, p. 200.

7. **Row-Peterson Arithmetic**, Book 7. 1952, pp. 70-83.  
**Making Sure of Arithmetic**, Book 7. 1952, pp. 167- 188.

8. **Row-Peterson Arithmetic**, Book 7. 1952, pp. 245-251.

4. (Cont'd)	<p>in the quotient will equal the number of places in the dividend minus the number in the divisor. If there is no decimal in the divisor, we place the decimal point in the quotient directly above the decimal point in the dividend.</p>
5. Learns the meaning of percentage.	<p>Pupils should not undertake to study percentage without an adequate understanding of the underlying fraction concepts. Stress the fact that percentage is merely a new word for an idea with which the pupils are already familiar. Teach the fact that percent means hundredths, thus:</p> <p>.14 equals 14 hundredths equals 14 percent equals 14% .85 equals 85 hundredths equals 85 percent equals 85% .07 equals 7 hundredths equals 7 percent equals 7%</p> <p>Inform pupils that businessmen and other people often use the term, "percent" when referring to hundredths. When a merchant advertises a reduction of 25 percent or 25% off on ladies' coats, he means that he has reduced the price 25 hundredths, or .25 or <math>\frac{1}{4}</math>.</p> <p>First lessons in percentage should be planned so as to show the close relationship between percentage and decimal fractions or common fractions. Percentage of attendance charts and graphs may provide purposeful activity in the use of percent.</p>
6. Learns fractional equivalents of commonly used percents.	<p>Make a wall chart showing the list of percents with their fractional equivalents. Each student may make a copy of his own for future use and study. Choose sides and have a contest to see which side has best automatic response.</p>
7. Understands and can solve problems with denominate numbers.	<p>Study tables pertaining to denominate numbers. Begin with simple changes by use of pictures or diagrams. Use actual measures, giving each child a chance to see literally, before putting a problem into figures. Work on the four fundamentals with this type of problem.</p>
8. Gathers information on the functions and services of a commercial bank.	<p>Visit a local bank. Invite local bankers to talk to class. Organize, set up and use a classroom bank. Identification is necessary before a check can be cashed. Banks are safe places for money. See Goal 56, Level Five.</p>

## SUGGESTED REFERENCES

9. **Everyday Living.** Goal 55.  
**Row-Peterson Arithmetic**, Book 7. 1952, pp. 252-253.
10. **Making Sure of Arithmetic**, Book 7. 1952, pp. 274-293.  
**Row-Peterson Arithmetic**, Book 7. 1952, pp. 158-188.
11. Osborn, Jess, and Riefeling, Adeline, **Cage Champions**, Adventures with Numbers, Webster Pub. Co., Los Angeles, 1948, p. 278.
12. **\*Study Arithmetic**, Book 5. 1948.
13. **Study Arithmetic**, Book 8. 1948, pp. 8-10.
14. **Making Sure of Arithmetic**, Book 7. 1952, pp. 270-275.

---

\*Knight, F. B., and others, Scott, Foresman and Co., Chicago, 1948.



9. Knows how to use money order.	Pupils should have experiences in filling out requests for money orders. Invite local postmaster to explain about sending money by money orders. Discuss how money can be sent by telegraph.
10. Has some understanding of rectangular figures, circles, and triangular surfaces.	Have students prepare a large chart, showing an example of each kind of figure. Write formula for finding area, perimeter, and circumference. Find examples and uses for each figure both in and out of the classroom.
11. Knows what taxes he pays.	Have pupils learn about the taxes they pay such as sales tax, and luxury taxes. Ask members of the class what taxes they pay as individuals. Get information and forms from tax officials. Have a member of the State or Federal tax bureau speak to the class.
12. Can write and use Roman numerals in daily class-work.	The writing of Roman numerals can be done in connection with everyday English activities and assignments.
13. Reads and writes numbers in billions.	Practice writing numbers in real life situations. Read from paper and magazine.
14. Has some understanding of line and its use.	Student should learn that straight lines take various positions and are used in various ways. Learn to recognize vertical, horizontal, oblique, parallel and perpendicular lines.

## SUGGESTED REFERENCES

15. \***Row-Peterson Arithmetic**, Book 8. 1952, pp. 27-28; 60-61; 99-101; 103-110.  
**Study Arithmetic**, Book 8. 1948, pp. 160-177.
16. **Row-Peterson Arithmetic**. Book 8. 1952, pp. 101-103.
17. Carpenter, Dale, and Drake, George F., Jr., **World of Numbers**, Book 8. The Macmillan Co., N. Y., p. 284.  
**Everyday Living**. Goal 55.  
\*\***General Mathematics in Daily Activities**. 1948, pp. 117-127.
18. **Everyday Living**. Goal 55.  
**Row-Peterson Arithmetic**, Book 7. p. 292.

---

\*Wheat, Harry Grove, and others. Row, Peterson and Co., Chicago.

\*\*Hart, Walter W., and Gregory, M. C., D. C. Heath Co., Boston, Mass.

15. Understands percentage problems.

The following topics may be considered:

- a. Changing decimals and fractions to percent
- b. Changing percents to decimals
- c. Changing common fractions to percent
- d. Changing percent to common fractions
- e. Three types of problems
- f. Percentage in connection with ratio

Provide problems which involve these four fundamental processes in percentage with which pupils should become well acquainted. These processes are used when percentage is applied to problem situations. This should not be difficult if percent has been defined as another word for hundredths.

Pupils should solve practical problems in each of the three types of percentage problems:

- 1. What is 5% of \$200?
- 2. \$15 is what percent of \$300?
- 3. \$12 is 6% of what amount?

The pupils may do some of the following activities to develop skill in solving percentage problems:

- a. Figure the percentage of words spelled correctly, problems solved correctly, and ball games won.
- b. Arrange a budget on a percentage basis.

16. Understands simple interest; uses table to compute interest.

Let pupils compute simple interest paid by local bank on various amounts of money in savings accounts. Compute interest collected by the bank on loans.

17. Understands advantages and disadvantages of installment buying.

Provide problems to show how much more it costs to purchase merchandise on the installment plan. Stress the point of not having too many payment obligations at one time.

18. Knows the obligations incurred by ordering C.O.D.

Invite the local postmaster to talk to the class. Point out the additional cost incurred by ordering merchandise by C.O.D.

## SUGGESTED REFERENCES

19. **Everyday Living.** Goal 55.

20. Osborn, Jesse, and Riefling, Adeline, **Cage Champions**, Adventures with Numbers, Webster Pub. Co., Los Angeles, 1948, pp. 218; 330-340.  
\* **Making Mathematics Work**, 1950.  
\*\* Fancher, Charles, and others, **Business Fundamentals for Everyone**, pp. 295-319.

21. Osborn, Jesse, and Riefling, Adeline, **Cage Champions**, Adventures with Numbers, Webster Pub. Co., Los Angeles, 1948, pp. 275-276; 218-282.

22. **Row-Peterson Arithmetic**, Book 8. 1952, pp. 134-135; 140-155.

23. **Row-Peterson Arithmetic**, Book 8. 1952, pp. 176- 185.

24. **Row-Peterson Arithmetic**, Book 7. pp. 174-175.

---

\* Nelson, Gilbert, and Grime, Herschel, Houghton Mifflin Co., Chicago.

\*\* Fancher, Charles and others. Prentice-Hall, Inc., N. Y.

- |   |  |
|---|--|
| 19. Begins to evaluate advertising in view of his own needs.  | Have students collect advertisements of things that appeal to them. Discuss each contribution separately, stressing the obligation incurred by answering the ad. Consider the need and usefulness of each article they seem particularly interested in. Stress the term, "making ends meet," showing them they must make a sacrifice somewhere else in order to meet the obligation of paying for the article. Discourage the answering of selling ads such as garden seeds, Christmas cards, salve, short courses in special training, etc. |
| 20. Knows when and how to order by express and freight.   | Compute shipping charges when ordering from a catalog. Evaluate comparative costs.   |
| 21. Knows the purpose of taxation; understands State and local tax plans.   | Pupils should learn that taxes are for the public benefit, are necessary, and are obligations of every citizen. Bring tax bills to school for discussion. Have committees visit local tax collecting offices for information. Figure easy individual tax returns.  |
| 22. Extends his knowledge of graphs.  | <p>Points to be considered include:</p> <ul style="list-style-type: none"><li>a. Bar and line</li><li>b. Pictorial</li><li>c. Circular</li></ul> <p>Collect graphs for study and discussion from magazines, daily papers, and books.</p> <p>Have pupils construct and explain graphs showing class or school attendance records, savings records and projects to raise funds.</p>  |
| 23. Has some understanding and can solve simple practical problems, including parallelograms, trapezoids and cylinders. | Each student should be able to recognize the figures and know the formulae for finding areas of the surfaces. Make paper cylinders to represent real things. Show how they spread out to form a rectangle.   |
| 24. Knows when one line is perpendicular to another line and what is formed when it is.                                 | Students may locate examples of perpendiculars in the classroom. They may note the number of degrees in an angle formed by constructing a perpendicular. Help each student understand the use of these vertical and horizontal line forma-   |



SUGGESTED REFERENCES

- 25. **Study Arithmetic**, Book 8. 1948, pp. 294-295.  
**Row-Peterson Arithmetic**, Book 8. p. 127
  
- 26. Carpenter, Dale and Drake, George F. Jr., **The World of Numbers**, Book 8.  
The Macmillan Co., N. Y., 1950, pp. 137-146.  
**Row-Peterson Arithmetic**, Book 8. pp. 167-175.
  
- 27. **Row-Peterson Arithmetic**, Book 7, pp. 223-225.

GOAL	LEVEL EIGHT	SUGGESTED ACTIVITIES AND TECHNIQUES
24. (Cont'd)		tions in design, home furnishing, clothing and construction. By the use of compass and ruler teach each student how to construct a simple perpendicular.
25. Learns to bisect an angle.		Student learns the use of a compass in connection with construction of geometric figures. Choose practical examples of angles in the classroom. Students may use this principle in making geometric art designs.
26. Extends his use of denominate numbers.		Pupils should realize the need for mastering denominate numbers for use in everyday life. He should know most used facts from memory and be able to solve any practical problem involving his everyday needs. He should be able to work problems in any of the four fundamentals.
27. Learns to make and read a simple scale drawing.		Let the pupils make simple working drawings of some objects they have made. Later, have them make a simple working drawing and then construct the object from it. Use such simple working drawings as those published by the Stanley Tool Co., to teach pupils to read and understand drawings and sketches. Begin with surfaces such as the table top and the classroom.

## SUGGESTED REFERENCES

28. **Everyday Living.** Goal 55.  
**Making Mathematics Work.** 1950, pp. 293-301.  
**Business Fundamentals for Everyone.** 1952, pp. 132-149.
29. **Making Sure of Arithmetic,** Book 8. 1952, pp. 322-324.  
**Row-Peterson Arithmetic,** Book 8. pp. 101-117.
30. **Everyday Living.** Goal 56.  
**Business Fundamentals for Everyone.** 1952, pp. 342-344.  
**Row-Peterson Arithmetic,** Book 8. pp. 314-315.
31. **Business Fundamentals for Everyone.** 1952, pp. 89-99.  
**Study Arithmetic, Book 8.** 1948, pp. 252-253.
32. Osborn, Jesse, and Riefing, Adeline, **Cage Champions.** Adventures in Numbers, Webster Pub. Co., Los Angeles, 1948, pp. 281-282.  
Nelson, Gilbert, and others, **Making Mathematics Work.** pp. 450-475.
33. Lasley, Sidney, and Mudd, Myrtle, **The New Applied Mathematics.** Prentice-Hall, Inc., N. Y., 1952, pp. 204-217.  
**General Mathematics in Daily Activities.** 1948, pp. 236-257.
34. \***Study Arithmetic,** Book 8. pp. 406-420.  
Osborn, Jesse, and Riefing, Adeline, **Cage Champions.** Adventures in Numbers. pp. 183-198.  
**Light on Mathematics,** Kit III Strips 1 and 2.

---

\*Knight, F. B., and others. Scott, Foresman and Co., Chicago.

GOAL	LEVEL NINE	SUGGESTED ACTIVITIES AND TECHNIQUES
28. Knows how to open a savings account.		Teach the meaning and importance of savings accounts by visiting a local bank and listening to a bank employee explain about savings accounts. Pupils learn to open an account by practicing the procedures in the classroom. Some pupils who have accounts may explain to the rest of the class how and what they did. Class funds may be kept in an account and records of deposits and withdrawals kept where class may view the balance sheet.
29. Knows about interest, principal and rate.		Have pupils solve practical problems involving these terms after they understand the meaning of the words. Teach them to understand the terms: compounded annually, semi-annually and quarterly, and the advantages of compound interest.
30. Understands about social security cards.		Fill in application forms. Apply for and obtain a card if age permits.
31. Knows how to send valuables by registered mail.		Practice the procedure in the classroom. Some pupils may have had this experience and can report to the class.
32. Has an understanding of Federal taxes.		Pupils should know the principles of taxation and how they are assessed and collected. This may be accomplished by visits to the local tax collector's office and listening to speakers familiar with the subject. Compute income tax on various income levels using the short form. Fill in withholding tax forms after discussions.
33. Has an understanding of special taxes.		Pupils should study and become familiar with other taxes such as cigarette, liquor and luxury taxes. Examine tax stamps and tables showing tax on various items. Compute tax on items commonly purchased by the family.
34. Understands simple equations.		In discussing the simple equation, stress the meaning and use in stating truths, in solving problems, and in translating verbal statements into symbols.

## SUGGESTED REFERENCES

35. Osborn, Jesse, and Riefeling, Adeline, **Home Run Hitters**. Adventures with Numbers. Webster Pub. Co., Los Angeles, 1948, pp. 142-155.  
**Making Mathematics Work.** pp. 148-200.  
**Everyday Living.** Goal 55.
36. Lasley, Sidney, and Mudd, Myrtle, **Arithmetic in Life and Work**, Fourth Edition. Prentice-Hall, Inc., N. Y., 1952, pp. 69-80.  
**Row-Peterson Arithmetic**, Book 8. pp. 194-195.
37. **Making Mathematics Work.** pp. 523-572.  
Osborn, Jesse, and Riefeling, Adeline, **Cage Champions**. Adventures With Numbers. pp. 209-234.



34. (Cont'd)

Develop the four laws of the equation. Pupils should solve many problems. State the problem verbally then make formulae by inserting symbols. The problems should be within the pupil's experience, in his interest, or of some practical social value.

35. Understands and prepares a household budget.

Collect sample budgets for study and discussion. Construct a circle graph showing percent of family dollar spent for various items in budget. Study expenses each family must meet. Make a budget for one, two or four people on a given salary, showing percent of salary spent for each item on the list. Show in dollars and cents how much money goes for each item.

36. Understands the relationship of ratio and proportion.

Pupils should know that ratio is simply another way of comparing two numbers and that some problems can be easily solved by setting up a ratio and using proportion to solve. Thus:

If a car goes 72 miles in 3 hours, how far will it go in 5 hours at the same rate? Solution:  $x$  equals distance in miles

$$\frac{x}{72} \text{ equals } \frac{5}{3} \quad 3x \text{ equals } 360, \quad x \text{ equals } 120$$

37. Understands and can solve problems involving volume of solids.

Some solids which you may wish to consider are the following: Cubes, cones, cylinders, pyramids and spheres. Show by blackboard diagram the relation of one geometric figure to another of the same type and how it can be expressed in terms of ratio.

The principle for finding volumes should be developed before formulae are written. Pupils should see and handle a wooden cube one inch on an edge. They will see that the box whose volume is a cubic foot will contain many of the inch-cube blocks. Further reflection will show that a square foot contains 12 rows, each of 12 one-inch squares. A cubic foot contains 12 layers, each one inch thick and each layer contains  $12 \times 12$  or 144 cubic inches. Thus, 1 cubic foot equals 12 times 12 times 12 or 1728 cubic inches. A minimum amount of work and time should be spent on this goal.

## SUGGESTED REFERENCES

38. \***Making Arithmetic Work.** pp. 292-359. 1950  
**General Mathematics in Daily Activities,** pp. 146-172.
39. **General Mathematics in Daily Activities.** 1948, pp. 47-77.  
**Row-Peterson Arithmetic,** Book 8. pp. 118-131.
40. **General Mathematics in Daily Activities.**  
Diagnostic and Computation Tests.  
**Business Fundamentals for Everyone.** pp. 441-467.

---

\*Nelson, Gilbert, and Grimes, Hershel, Houghton Mifflin, Chicago.

38. Understands the purposes of insurance and investments.	Pupil should understand that insurance is a protection and investment. Invite a local insurance agent to talk to the class. Study the advantages and disadvantages of various policies and their reliability. Collect samples of mortgages, stock certificates, and bonds.
39. Extends his knowledge of line and geometric figures.	Each student should improve his use of compass and protractor in the construction of geometric figures. Geometric design affords a good opportunity to develop this skill. Practice construction of a perpendicular to a given point on a given line and the construction of angles twice or three times as large as a given angle. Draw a cube. Note the difference in it and surface figures. Stress the third dimension preparatory to finding volume.
40. Recognizes that all phases of the four fundamentals are essential.	Stress the need for quick accurate response by pointing out the individual weaknesses. Use diagnostic testing followed up by special exercises where strength is needed.



**GOALS**

**LEVELS SEVEN, EIGHT, AND NINE**

**ENGLISH**



## SUGGESTED REFERENCES

1. \* **Building Better English**, Grade 7, 1952.
- \*\* Johnson, Roy Ivan, and others, **English Every Day**, Grade 7. Ginn and Co., Chicago, 1943, pp. 197-200; 209-221.
- Orr, Ethel M., and others, **Reading Today, Book I**. Charles Scribner's Sons, N. Y., 1947.
- Gates, Arthur I., and others, **The Pupil's Own Vocabulary Speller**, Book 7. The Macmillan Co., N. Y. 1950.
- Ballington, Lillian E., **Using Words with Judgment**, Book 7. Silver Burdett Co., Dallas, 1950.
- Film: **How to Read a Book** 16 mm 10 minutes

2. Eberhart, Wilfred, **Reading-Literature, Book I**. Row-Peterson and Co., Evanston, Ill., 1955.
- \* **Building Better English**, Grade 7, 1952.
- Bailey, Matilda, and Leavell, Ullin W., **Worlds of Adventure**. American Book Co., Dallas, 1951.
- Wagenheim, Harold W., **Read Up on Life**. Henry Holt and Co., N. Y., 1952.
- Helping Children Read Better**, Better Living Booklets. S. R. A., Chicago.
- Reader's Digest Reading Skill Builder Series**. Reader's Digest Educational Service, Inc., 353 Fourth Ave., N. Y. 10, N. Y.
- \*\*\* Witty, Paul, **Streamline Your Reading**, Life Adjustment Booklet. S.R.A.
- Film: **Improve Your Reading** 16 mm 10 minutes

---

\*Green, Harry A., and Ashley, Kate, Row-Peterson and Co., Chicago.

\*\*Johnson, Roy Ivan, and others, Ginn and Co., Chicago.

\*\*\*Science Research Associates, Inc., 57 W. Grand Ave., Chicago 10, Illinois

1. Continues to improve his skills in reading for different purposes.

A basic aim of reading instruction is to help pupils understand what they read and study. Increased proficiency in reading can be attained best by practice. Study skills are developed in connection with all activities of the school day. An effective program of instruction requires the cooperation of every teacher in the school. Each classroom teacher is responsible for the reading skills necessary in the particular field.

1. When grasping a new fact or process, acquire a new word to express it.
2. Pay particular attention to the definition of terms.
3. Refer to the dictionary for terms not otherwise clear.

Train pupils to reread passages for comprehension of unfamiliar terms.

Lead pupils, as rapidly as possible, to independence in their study.

2. Increases his reading rate.

Pupils should understand the importance of their reading rate, and teachers of the various subject-matter fields should guide them in developing a rate suitable to the type of material and the purpose for which it is read. Emphasis should always be upon comprehension.

Four suggestions are made to teachers who want to encourage pupils to increase their reading rate:

- a. Build an interest in reading by providing materials based on interest and ability of the pupils.
- b. Encourage each pupil to read as much as he can.
- c. Help the pupils determine how rapidly they are able to read.
- d. Discuss the importance of rapid reading. Interest pupils in undertaking a program to improve their reading rate.

Devices to increase reading rate:

- a. Teacher should read aloud with pupil. The tempo may gradually be increased.
- b. Teacher may read aloud to the group; pupils follow with markers.
- c. Teach pupils techniques of skimming and finding main points.
- d. Use timed reading drill.
- e. Discourage lip reading.

(See Preface)

## SUGGESTED REFERENCES

3. \***Words and Ideas**, 1954, pp. 29-48; 203-218.  
Abney, Louise, **Choral Speaking Arrangement for the Upper Grades**.  
Expression Co., Boston, Mass., 1953.  
Film: **Conversation** 16 mm 11 minutes
4. **Words and Ideas**, 1954, pp. 33-36.  
\*\***Enjoying English**, Grade 7. 1950, pp. 127-142.  
Shane, Harold G., and others, **Growth in Good English**. Laidlaw Bros.,  
Dallas, 1952.
5. Bair, Frederick H., and others, **Better English Usage**. The Macmillan Co.,  
N. Y., 1940.
6. \*\*\***Mastering Your Language**, Book 7, 1951.
7. **Mastering Your Language**, Book 7, 1951.  
**Building Better English**, Grade 7, 1952.  
Cummings, William J., and Derwinski, Beatrice, **Adventures in English**, 7.  
Allyn and Bacon, Inc., Dallas, 1952.  
Herzberg, Max J., and others, **Better English**, Grade 7, Ginn and Co.,  
Dallas, 1952.
8. **Mastering Your Language**, Book 7, 1951.  
Ferris, Florence K., and others, **Learning Essential English**, Book 8,  
Laidlaw Bros., Chicago, 1945.

---

\*Pollock, Thomas Parke, and Rounds, Robert W., The Macmillan Co., N. Y.  
\*\*Wolfe, Don M., and others. L. W. Singer Co., Syracuse, N. Y.  
\*\*\*McKee, Paul, and others. Houghton Mifflin Co., Chicago.

- |   |  |
|---|--|
| 3. Extends improvement of enunciation and pronunciation in all speech activities.               | Participates in informal discussion, conversation, dramatization, and choral reading. Gives book reviews, newscasts, presides at club meetings. Uses the tape recorder.  |
| 4. Develops better listening habits.  | Listens to recommended TV and radio programs. Listens to recordings to gather information. Listens courteously to student speakers. Writes down study assignments and other directions given by the teacher. Practices good listening in social conversation.  |
| 5. Understands the importance of correct usage of verbs in the effective expression of thought. | One practice for students who are learning the English language is to have them use the third person singular of the verb. By using student's own oral and written work, help them learn correct usage of verb forms. Draw humorous cartoons personifying the verbs.   |
| 6. Uses nouns and pronouns correctly.   | Learns to recognize nouns and pronouns, singular and plural. Compares the grammar of his own language with English grammar. Chooses the correct number of noun and pronoun in his written and oral English.  |
| 7. Can analyze a sentence into subject and predicate as an aid to expressing written thoughts.  | To achieve the objective of an oral and written language, the pupil must be taught to express himself accurately and concisely. At the beginning of the year a test may be given to help the teacher and pupils to determine their needs. Plan the work to meet these needs. The technical part of language expression should be used only as it helps to clarify a point for the student. A simple diagram may help the pupil understand that both subject and predicate are necessary to express a complete thought. |
| 8. Understands the difference between sentences and phrases.                                    | Teaching pupils how to use dictionaries and handbooks to settle their uncertainties is an important phase of learning. The habit of consulting recent and valid sources of information will help keep pupils in touch with English as a living, changing language.<br><br>Inductive instruction in grammar will lend strength to the skill of noting true sentence meaning, phrasing in oral reading, and determin-  |

## SUGGESTED REFERENCES

9. \* **Handbook of Synonyms, Antonyms, and Prepositions**, N. Y., 1947.  
Kibbe, Delia E., and others, **Handbook of English for Boys and Girls**.  
Scott, Foresman and Co., Chicago, 1939.  
Ballington, Lillian E., **Using Words with Judgment**, Book 7. Silver  
Burdett Co., Dallas, 1950.  
**Everyday Living**. Goals 19-22.  
Thorndike, E., **Teacher's Handbook of 30,000 Words**. Columbia Teach-  
ers College, 1944.  
\*\* **Language for Daily Use**, Grade 7. 1955, pp. 127-209.  
Film: **Build Your Vocabulary** 16 mm 10 minutes

10. **Handbook of Synonyms, Antonyms, and Prepositions**, 1947.  
**Language for Daily Use**, Grade 7. 1955, p. 199.

---

\* Fernald, James C., Funk & Wagnalls Co., N. Y.

\*\* Foley, Mary C., and others. World Book Co., Yonker-on-the-Hudson, N. Y.



8. (Cont'd)

ing relationships of sentence parts. Diagramming or marking sentence subjects, predicates, phrases, and clauses with colored pencils may prove to be an aid in gaining this understanding. Use materials on the child's own level.

9. Shows growth in the use and understanding of words.

The teacher should constantly be alert to the problems of developing a vocabulary which is broad, simple, specific, accurate, and colorful. These words should come from daily living activities.

To develop an interest in vocabulary building, a pupil may estimate his vocabulary by the following procedure:

1. Select at random one page from each hundred pages in the dictionary; read down the list of words and count those you actually use in speaking and writing.
2. Add your number from different pages; then multiply the sum by one hundred. The product will be a rough estimate of words in your **active vocabulary**.
3. On each page selected, also count the additional words which you do not use yourself, but which you understand in reading or listening. Multiply the sum of these words by one hundred and you will arrive at your **passive vocabulary**.
4. Now add the words in your active vocabulary to the number in your passive vocabulary, and you will arrive at a rough estimate of your total vocabulary.

Some ways to learn new words:

1. Listen to the radio
2. Read material which is expressive and attractive
3. See movies and TV
4. Talk with other people
5. Read newspapers
6. Read easy scientific material
7. Use the dictionary
8. Play word games
9. Learn common prefixes, suffixes, synonyms and antonyms
10. Learn how our language grows

10. Recognizes synonyms and antonyms.

The more recently published reading books make provision for the study of synonyms and antonyms

## SUGGESTED REFERENCES

11. **Elementary School Libraries Today.** Thirtieth Yearbook of the Department of Elementary School Principals. No. 1, National Educational Association, 1201 Sixteenth Street, N. W., Washington, D. C., 1951.  
Mott, Carolyn, and Baisden, Lee B., **Children's Library Lesson Book.** Charles Scribner's Sons, N. Y., 1937.  
**Language for Daily Use,** Grade 7. 1955, pp. 241-250.

10. (Cont'd)

as important phases of reading. Synonyms are words which express essentially the same idea but often have shades of difference in meaning. Pupils should note that dictionaries use synonyms in defining words.

The following suggestions for preparation of exercises may be helpful:

(a) Write in a column on the blackboard from a reading selection, 10 difficult words which have simple synonyms. Write also, but in a different order, one synonym for each of the difficult words. Beside each word in the first column, write the synonyms in a second column.

	First Column	Second Column
Example:	same	alike

This type of matching can also be used with antonyms.

(b) Write on the blackboard sentences from a reading selection containing groups of words for which synonyms can be supplied. Underline the groups of words. For each underlined expression, pupils will choose an appropriate synonym, re-writing sentences.

Example:    **Little by little** he crept up the hill.  
                 **Gradually** he crept up the hill.

Antonyms are words which are opposite or nearly opposite in meaning. Dictionaries often give antonyms as well as synonyms in defining words.

Example:    abolish - establish

11. Locates the books that he wants in the library.

The student should know how to use the library system in his school. Since the libraries of the Indian Bureau schools vary from classroom libraries to large organized libraries, this goal can be attained according to the local facilities. In some schools it will be very elementary; in others it may include:

- a. Arrangements of books in a library
- b. Guides
  - 1. Outside label on drawer in card catalog
  - 2. Guide cards inside the drawer

## SUGGESTED REFERENCES

12. **A Program in English.** Denver Public Schools, 1953.  
**Language for Daily Use,** Grade 7. 1955, pp. 101-126.
13. **Everyday Living.** Goal 24.
14. **Everyday Living.** Goal 24.
15. **Everyday Living.** Goal 27.  
Johnson, Roy Ivan, and McGregor, A. Laura, **English for Your World.**  
Ginn and Co., N. Y., 1944.

11. (Cont'd)

- c.    1. Title
- 2. Author
- 3. Subject
- 4. Cross reference
- d.    Dewey Decimal System

Activities:

- a.    Work out a skit on the arrangement of books and the Dewey Decimal System.
- b.    Have a library club.

12. Does creative writing.

Writes personal experiences and simple poems. Collaborates with others in writing group poems and dramatizations. Reports for the school paper.

13. Shows growth in ability to follow specific directions.

Refer to Goal 43, Level Six. Pupil should develop an ability to follow instructions in the performance of practical tasks, such as following recipes, building model planes, etc.

Provide practice exercises interesting to the particular group and making use of oral directions.

14. Collects the material necessary for study and gets to work immediately.

Good study and learning habits are necessary.

Work out with the students a good system of study. Put this system into practice if possible.

15. Gives clear and simple directions in an extemporaneous speech on how to make or do something.

Living situations such as "How to Make a Bed" and "How to Study" may be utilized as a means to begin extemporaneous speech.



## SUGGESTED REFERENCES

16. John, Mellie, **Building Better English**, Grade 9. Row, Peterson and Co., N. Y., 1951, pp. 162-172.
  
17. \***Language Arts for Modern Youth**, Book I, 1939, pp. 317-322.  
 \***Language Arts for Modern Youth**, Book II, 1929, pp. 315-319.  
 \*\***English**, Grade 7, 1948, pp. 163-182.  
 \*\***English**, Grade 8, 1948, pp. 171-194.  
**English Every Day**, Grade 7. Ginn and Co., Chicago, 1943, pp. 255-278; 312-327.
  
18. **Language Arts for Modern Youth**, Book I, 1939, pp. 17-20.  
**Language Arts for Modern Youth**, Book II, 1939, pp. 75-82.  
**Building Better English**, Grade 8, 1944, pp. 178-201.  
 Foley, Mary C., and others, **Language for Daily Use**, Grade 8.  
 World Book Co., Yonkers-on-the-Hudson, N. Y., 1955, pp. 25-40.
  
19. Murphy, George E., and others, **Let's Read**. Henry Holt and Co., N. Y., 1955.  
 Witty, Paul, **How to Become a Better Reader**. S. R. A., Chicago, 1953.  
 Grover, Charles, and Boyle, Evelyn, **Practice Readers**, Book 4, Webster Pub. Co., Dallas, 1949.  
**Language Arts for Modern Youth**, Book I, 1939, pp. 92-93.  
**English**, Grade 7, 1948.  
**English**, Grade 8, 1948.  
 McKee, Paul, and McKee, Annie, **Enriching Your Language**, Book 5.  
 Houghton Mifflin Co., Dallas, 1948, Chapters 7, 8, 9.  
 \*\*\***Building Better English**, Grade 8, 1944, pp. 190-200.  
 Gray, W., **On Their Own in Reading**. Scott, Foresman and Co., Chicago, 1948.  
 Bailey, Matilda, and others. **Worlds of People**. American Book Co., Dallas, 1955.  
 Film: **Better Reading** 16 mm 12 minutes

---

\*Cassell, Mabel V., and others. Charles E. Merrill Co., Columbus, Ohio.

\*\*Stoddard, Alexander J., and others. American Book Co., Chicago.

\*\*\*Greene, Harry A., and Ashley, Kate, Row, Peterson, and Co., N. Y. (Grades 7 and 8)

16. Improves skill in interpreting maps, tables, charts, and cartoons.	This goal is a mature development of Goal 51, Level Five. The maps, tables, charts, and cartoons the pupil uses are more complex than those he used in Level Five.
17. Uses modifiers to express different shades of meaning:  a. Adjectives b. Adverbs	The children should call adjectives by name and understand that they add to the meaning of nouns. Use phrases such as "to a white house" and "to a brown house" to show how adjectives change the meaning. Similar use should be made of numerals, demonstratives, indefinites, articles; but the children should not be required to call the kinds of adjectives by name. The examples used should include the range of samples the child will use at the present maturity level.
18. Increases his skill in outlining; knows how to use one-word, phrase, and sentence outlines.	<p>The student should acquire proficiency in outlining by using skill in preparing reports, recording minutes of a meeting, taking notes on an assembly talk, radio speech, newspaper article, or book.</p> <p>Have group discussions of outlines made. Suggest ways of improving the outlines.</p> <p>Make skeleton of main points; have student fill in supporting details.</p>
19. Reads material on his level and makes a clear, intelligent summary, both oral and written.	In Goal 33, Level Six, the child has participated in making summaries with his group. At this level, he uses his previous skill to make his own individual summary of the material he reads.

## SUGGESTED REFERENCES

20. Riper, C. Van, **Helping Children Talk Better**. Better Living Booklet. S.R.A., Chicago.  
 Foley, Mary C., and others, **Language for Daily Use**, Grade 8. World Book Co., Yonkers-on-the-Hudson, N. Y., 1955, pp. 91-98.  
 Films: **Improve Your Pronunciation** 16 mm. 11 minutes  
           **Using Your Voice** 16 mm. 11 minutes
  
21. Ernst, Margaret S., **Words**. Alfred Knopf, N. Y., 1937.  
 Eberhart, Wilfred, and others, **Reading Literature**, Book Three, Revised. Row, Peterson and Co., Evanston, Ill., 1955.
  
22. **Building Better English**, Grade 8, 1944, pp. 295-314.  
 Pollock, Thomas Clark, and others, **Thought and Expression**. Macmillan Co., N. Y., 1954, pp. 131-133.
  
23. Wolfe, Don, **Enjoying English**, Grade 8. L. W. Singer Co., Inc., Syracuse, N. Y., 1950.  
**English**, Grade 7, 1948.  
 \*Learning Essential English, Book 8, 1945, pp. 37-39.
  
24. **English**, Grade 7, 1948, pp. 120-121.  
**English**, Grade 8, 1948, p. 296.  
 \*\***Perfecting Your Language**, Grade 8, 1948, Chapter I.  
**Scholastic magazine**. Scholastic Corp., Office of Publications, McCall St., Dayton, Ohio.
  
25. \*\*\***Thought and Expression**, 1954.
  
26. **Building Better English**, Grade 8, 1944, pp. 54; 143-144.  
**Language Arts for Modern Youth**, Book I. 1939, pp. 337-340.

---

\*Ferris, Florence K., and others. Laidlaw Bros., Chicago.  
 \*\*McKee, Paul, and others. Houghton Mifflin Co., Dallas.  
 \*\*\*Pollock, Thomas Clark, and others. The Macmillan Co., N. Y.

20. Makes a conscious effort to speak audibly.

Students may rate each other on audibility. The student records and listens critically to his speech. He dictates short passages to his classmates. He learns to hold his body erect, to open his mouth wider, and to breathe deeply.
21. Shows growth in word usage.

As the child meets new words in his reading (study material, leisure-time, or vocational) he should add to his vocabulary those words in the activities he is pursuing.
22. Uses a variety of connective words to express his thoughts.

Discuss when to use "and" (similar ideas) and when to use "but" (contrasting ideas) in writing compound sentences.

Discuss how the meanings of sentences are changed by using a variety of introductory words: "when," "then," "after," "before," etc.

Use pictured forms to illustrate the importance of the connective words.
23. Recognizes declarative, imperative, and interrogative sentences.

The child has been speaking and writing the various types of sentences. Teach him to speak of them by name. Check for punctuation at the close of sentences.
24. Recognizes homonyms.

Finds jokes on his level which depend on homonyms for humor. (**Junior Scholastic**) Class makes scrapbook of such jokes. Makes simple crossword puzzles containing homonyms. Group contest: construct chart listing homonyms encountered.
25. Contributes information directly related to the topic under discussion by the group.

This goal is an extension of Goal 35, Level Five, and Goals 31 and 33, Level Six. The student has already learned to organize the material he contributes. He should evaluate his material on the basis of its value to the group and contribute only that which will be of help.
26. Uses the comma before the conjunction in a long compound sentence.

Learning to put the comma in the proper place further develops the child's concept of compound sentences. He has been joining short simple sen-



## SUGGESTED REFERENCES

26. (Cont'd)  
**Learning Essential English**, Book 8, 1945, pp. 22-36.  
Film: **Punctuation:**  
          **Mark Your Meaning**           16 mm. 10 minutes  
Filmstrip: **All Aboard the Punctuation Express**
27. **Language Arts for Modern Youth**, Book I, 1939, pp. 337-340.  
**Learning Essential English**, Book 8, 1945, pp. 32-36.  
**Perfecting Your Language**, Grade 8, pp. 207-209.  
Film: **Punctuation:**  
          **Mark Your Meaning**           16 mm. 10 minutes
28. **Language Arts for Modern Youth**, Book II, 1939, pp. 381-383.  
**Building Better English**, Grade 8, 1944, pp. 167-169.  
**Enjoying English**, Grade 8, 1950, pp. 259-269.  
**Perfecting Your Language**, Grade 8, 1948, pp. 124-129.  
Film: **Punctuation:**  
          **Mark Your Meaning**           16 mm. 10 minutes
29. **Language Arts for Modern Youth**, Book II, 1939.  
**English**, Grade 8, 1948, pp. 169-170.  
**Perfecting Your Language**, Grade 8, pp. 52-55.
30. **Building Better English**, Grade 8, 1944, p. 113.  
**Perfecting Your Language**, Grade 8, 1948, pp. 37-42.  
Burleson, David Sinclair, and Burleson, Christine, **Adventures in English**.  
Allyn and Bacon, Inc., Dallas, 1952.
31. **Thought and Expression**, 1955, pp. 233-248; 379-394.
32. National Educational Association, **Elementary School Libraries Today**.  
Thirtieth Yearbook of the Department of Elementary School Principals,  
Vol., XXXI, No. 1, 1951, National Educational Association, 1201  
Sixteenth Street, N. W., Washington, D. C.



26. (Cont'd)      tences with conjunctions, but now when those sentences are longer, he finds he must put a comma before the conjunction.
27. Uses a semicolon in compound sentences when there is no conjunction.      An advance step in working with compound sentences is to drop the comma and conjunction, and use the semi-colon instead.
28. Writes possessive plurals and possessive singulars correctly.      To show ownership, change the forms of nouns and pronouns. The student probably won't have much trouble with the possessive forms of the personal pronouns, but the use of the apostrophe is used in these forms. Provide occasion for its use.
- Cassell, in **Language Arts**, gives good cartoons that may be used to illustrate this concept.
29. **Uses bibliographies.**      In recording information the child should be taught to give credit to the source from which he secures his information. He should give author, book, and pages.
30. Shows growth in ability to write paragraphs.      This goal is an extension of Goal 39, Level Six. The child's growth should be shown in his ability to develop paragraphs from outlines.
1. Oral history report  
      2. Science report (written)
31. Extends his interest in creative writing.      See Goal 12, Level Seven. Contributes editorials and literary articles for the school paper. Writes brief stories of imaginary characters with settings in American history. Exchanges letters with eighth graders in other schools. Designs greeting cards and writes original greetings. Writes original endings to incomplete stories read by the teacher or other students.
32. Participates in the operation of his own school library.      The goals for the use of the library are triple: skill, liking, choice. These goals can be achieved through actual participation in the operation of

## SUGGESTED REFERENCES

32. (Cont'd)

Johnson, Ivan Roy, and others, **You and Your English**, Grade 8. Ginn and Co., Chicago, 1943, pp. 238-248.

Bell, John W., and others, **The English We Need**, Book I. The John C. Winston Co., Dallas, 1946.

Pearson, R., **New Art Education**. Harper Bros., Dallas, 1941.

32. (Cont'd)

the library. On this level the pupils should be given opportunities to work in the library. Some of the activities may be:

1. Ventilating the library
2. Keeping plants and bulletin board
3. Making decorations
4. Repairing books
5. Making booklets for the vertical file
6. Keeping the library clean
7. Returning books on time and paying for lost or damaged books
8. Making posters advertising books

## SUGGESTED REFERENCES

33. \***English in Action**, Course 1. 1955, pp. 141-157.  
 Orr, Ethel M., and others, **Reading Today**, Book I. Charles Scribner's Sons, N. Y., 1947, pp. 579-590.  
 Johnson, Roy Ivan, and McGregor, A. Laura, **English for Your World**. Ginn and Co., N. Y., 1944, pp. 209-222.  
 Simpson, Elizabeth, **Helping High School Students Read Better**. S. R. A., Chicago, 1954.  
 Knight, Pearle E., and Traxler, Arthur E., **Develop Your Reading**. Little Brown and Co., Boston, 1943.  
 Bailey, Matilda, and others, **Worlds to Explore**. American Book Co., N. Y., 1951.  
 Ross, Jacob M., and others, **Adventures for Readers**, Book I. Harcourt Brace and Co., Inc., N. Y., 1953.  
 Pooley, Robert C., and others, **Good Times Through Literature**. Scott, Foresman and Co., Chicago, 1951.
  
34. Broening, Angela M., and others, **Reading for Skill**. Laurel Book Co., Chicago, 1940, pp. 33-161.  
 \*\***Building Better English**, Book IX, 1955, pp. 130-136.  
**English in Action**. Course 1, 1955, pp. 158-169.  
**Everyday Living**, Goal 22.
  
35. Watson, Winifred, and Nelte, Julius M., **A Living Grammar**. Webb Pub. Co., St. Paul, Minn., 1951.  
**Building Better English**, Book IX, 1955, pp. 248-263.
  
36. **English in Action**, Course 1, pp. 396-397; 349; 409.  
**Building Better English**, Book IX, 1955, pp. 379-385.  
 Burnham, Phillip, **Basic Composition**, Book I, 1955, pp. 338-341.
  
37. **Building Better English**, Book IX, pp. 264-282.  
**English in Action**, Course 1, pp. 355-378.  
 Johnson, Roy Ivan, and McGregor, A. Laura, **English for Your World**, Ginn and Co., N. Y., 1944, pp. 267-268.
  
38. **Building Better English**, Book IX, 1955, pp. 119-124.  
**English in Action**, Course 1, 1955, pp. 127-129; 228-229.  
 Johnson, Roy Ivan, and McGregor, A. Laura, **English for Your World**. Ginn and Co., N. Y., 1944., pp. 220-222.

---

\*Tressler, J. C., and Christ, Henry I., D. C. Heath and Co., Boston, Mass.

\*\*John, Mellie, and others. Row, Peterson and Co., Evanston, Illinois.

33. Understands the purpose of the author in writing an article, a novel, a factual report.

In order for the student to understand the difference between fact and opinion, he must know the different kinds of writing and the author's approach. If he can determine whether what he reads was written to inform, to influence, or to entertain, he can classify the material. He learns to refer to informative sources for facts and to fiction for fun. He should learn to question the author's sources. In making his oral and written reports he should state the specific purposes of the author. Each student may have an individual graph with sections for fiction, biography, and history, which he fills in for himself as he reads different types of writing.

34. Reads different kinds of periodicals suitable to his level.

The student should be taught to refer to various periodicals in gathering information for use in panel discussions. Through use he should develop an interest in many magazines.

35. Recognizes all parts of speech.

The student has had considerable experience in identifying parts of speech. At this time he may increase his familiarity by playing a number of word games.

36. Uses conjunctions to join parts of sentences correctly.

By using conjunctions to join clauses and like parts in sentences, the student grows in understanding of simple, complex, and compound sentences. He learns that coordinating conjunctions connect like parts. This skill should be demonstrated by the teacher and encouraged in student writing.

37. Uses the principal parts of verbs correctly.

Some common English faults are the use of a present participle in place of the complete verb, the joining of infinitives and participles with the coordinating conjunction, and the use of the past participle to complete verbs in the perfect tenses. The correct use of the principal parts must be demonstrated in the various places where they occur. The teacher will check student work for errors and devise drill to develop understanding. Fun can be had with cartoons on this subject.

38. Outlines different types of materials.

A student will be reading a variety of materials. Outlines should be used as preparation for oral and written reports and as summaries of material read. He will grow in his ability to select the main idea and sub-ideas in a paragraph.



## SUGGESTED REFERENCES

39. **A Program in English.** Denver Public Schools, 1953.  
**English in Action**, Course 1, 1955, pp. 45-62.
40. **A Program in English.** Denver Public Schools, 1953.
41. **Building Better English**, Book IX, pp. 375-378.
42. **Building Better English**, Book IX, 1955, pp. 93-103.  
Johnson, Roy Ivan, and McGregor, A. Laura, **English for Your World.**  
Ginn and Co., N. Y., 1944, pp. 321-330.  
**English in Action**, Course 1, 1955, pp. 92-114.  
Film: **Build Your Vocabulary** 16 mm 10 minutes
- 43.
44. **Everyday Living.** Goals 18 and 19.  
Goldberger, I. H., and Hallock, Grace T., **Understanding Health.**  
Ginn and Co., Boston, 1950, pp. 233-238.  
Blumenthal, Joseph C., and others, **Living Language**, Grade 9. Harcourt  
Brace and Co., N. Y., 1953, pp. 100-117.

39. Writes acceptable social letters.
- Students may write letters to classmates who are sick, to authors whose books they like, to people who have helped the class in any way, and to relatives and friends in military service.
- Students should examine good sample letters and be familiar with the correct form.
40. Analyzes and corrects the errors he makes in written sentence construction.
- Before the student begins to analyze and correct his mistakes, he must develop a desire to do so and enough skill to make this possible. Through the help of the teacher he may realize the social and financial advantages of being able to read and write correctly. Then, after his mistakes have been pointed out, and the correct forms demonstrated, he can assume responsibility for his own improvement. The teacher should provide many occasions where his work will be held up to the scrutiny of his classmates or a wider audience. He may write for school publications and display his work.
41. Uses prepositions in phrases to enlarge the meaning of the sentence.
- A prepositional phrase qualifies a statement, adds details, and makes the meaning clearer. After the student has a clear concept of the functions of a prepositional phrase, he may go on to the fact that objects of the preposition must be in the objective case. Then he can eliminate such errors as "between you and I," "he waited for Harry and I," and others.
42. Shows growth in word usage.
- The student should be encouraged to keep personal records of new words learned in all his fields of study. This is something all teachers should work on and English teachers must emphasize. He will use new words in recounting his experiences and in looking for new material. Comprehensive vocabulary tests are interesting to students and help them to check their progress.
43. Improves his written English in his social studies, vocational, science, and other classes.
- Papers written in other classes may be checked by the English teacher. The English teacher may collaborate with other teachers in assigning and checking written work.
44. Knows how to carry his share of the conversation in adult groups.
- The student should show an interest in the affairs of older people as a matter of courtesy. He should try not to monopolize the conversation.

## SUGGESTED REFERENCES

45. **English in Action**, Course 1, 1955, pp. 158-160.  
Johnson, Roy Ivan, and McGregor, A. Laura, **English for Your World**.  
Ginn and Co., N. Y., 1944, pp. 209-251.
46. **Building Better English**, Book IX, 1955, pp. 104-129.  
Johnson, Roy Ivan, and McGregor, A. Laura, **English for Your World**.  
Ginn and Co., N. Y., 1944.  
Wagenheim, Harold H., and others, **Read Up on Life**. Henry Holt and  
Co., N. Y., 1952.  
Bailey, Matilda, and Leavell, Ullin W., **Worlds to Explore**. American  
Book Co., 1951.  
**English in Action**, Course 1, 1955, pp. 431-440.
47. **English in Action**, Course 1, 1955, pp. 431-440.  
\***Basic Composition**, Book I, 1949.  
**Building Better English**, Book IX, 1955, pp. 386-417.
48. **Basic Composition**, Book I, 1949, pp. 1-21.  
**English in Action**, Course 1, 1955, pp. 355-380.  
**Building Better English**, Book IX, 1955, pp. 264-282.
49. \*\***Living Language**, Grade 9, 1953, pp. 288-292.  
Sarett, Lew, and others, **Speech, A High School Course**. Houghton  
Mifflin Co., N. Y., 1951.
50. **Basic Composition**, Book I, 1949, pp. 295-330.  
**Building Better English**, Book IX, 1955, pp. 160-161.

---

\*Burnham, Phillip, Scott, Foresman and Co., Chicago, Ill.

\*\*Blumenthal, Joseph C., and others, Harcourt, Brace and Co., Chicago.

45. Takes initiative in keeping himself informed on current affairs.	The student should have enough background in local and world affairs so that he wants to keep current with what is going on. Regular use can be made of the radio. Current issues of newspapers and magazines should be available in the room and the library at all times. He should take part in informal class and group discussions of current events.
46. Reads a variety of material for recreation.	The special reading program at this level should be largely for fun. The teacher should try to help the student select worthwhile books that he may enjoy. The idea here is to extend his reading into a leisure-time activity.
47. Experiments with a variety of sentence expressions.	The student's work is becoming more mature, and he is writing longer sentences. He needs help in organizing sentences properly. He should use simple, complex, and compound sentences with considerable ease; he should realize that variety makes his work more interesting.
48. Use the third person singular, present tense, and the past tense correctly.	The third person singular, present, and the past tense are trouble spots. Many Indian children have trouble because they translate literally from the Indian to the English. If the student gets a very clear picture of what he is doing he can help himself a great deal. Most teachers need to enlist the help of a good interpreter to bring this about. Later, give him some understanding of the framework of English grammar, demonstrating the use of the present and past tenses of verbs.
49. Analyzes his own speech errors and attempts to eliminate them.	The teacher may list the speech errors found among members of the group. The student may then prepare a rating chart for himself, deciding which errors are his own. He may check himself at regular intervals with the help of other students and the teacher. Not only grammatical errors but also mistakes in enunciation and pronunciation should be included.
50. Uses the comma after an adverb clause in a complex sentence.	The student should understand the function of adjectives and adverbs. He should see the adverb clause as an enlarged form of a one-word adverb. Once he recognizes the adverb clause, the habit of placing a comma after it will be easier to establish.



## SUGGESTED REFERENCES

51. **English in Action**, Course 1, 1955, pp. 127-129; 228-229.  
**Building Better English**, Book IX, 1955, pp. 119-123.
52. **Living Language**, Grade 9, 1953, pp. 368-376.  
**Building Better English**, Book IX, 1955, pp. 146-152.  
**English in Action**, Course 1, 1955, pp. 280-287.  
Johnson, Roy Ivan, and McGregor, A. Laura, **English for Your World**.  
Ginn and Co., N. Y., 1944, pp. 273-284.
53. **English in Action**, Course 1, 1955, pp. 193-201.  
**Everyday Living**. Goal 19.
54. Van Riper, C., **You Can Talk Better**, Junior Life Adjustment Booklet,  
\*S. R. A., Chicago, 1953.
55. Jenkins, Gladys G., and others, **Teen-Agers**. Scott, Foresman and Co.,  
Chicago, 1954, pp. 78-82.  
**Living Language**, Grade 9, 1953, pp. 24-41.  
Sarett, Lew, Foster, Trufant William, and McBurney, James B., **Speech,  
a High School Course**. Houghton Mifflin Co., N. Y., 1951.  
**Basic Composition**, Book I, 1949, pp. 434-436.  
Bell, John W., and others, **The English We Need**. The John C. Winston  
Co., Dallas, 1943, pp. 133-144.

---

\*Science Research Associates, 57 W. Grand Ave., Chicago 10, Ill.



51. Uses capitalization in an outline.	The use of the capital in the first word of the sentence should be definitely established by now. Teach the student to carry this usage over into the writing of the first word in each part of an outline.
52. Uses correct capitalization habitually.	This goal will be achieved through a combination of teaching factors: development of a critical attitude on the part of the student toward his own work, many uses for written work in which a high standard is demanded, and demonstration and much checking on the part of the teacher.
53. Draws inferences and conclusions from the books and editorials that he reads, the movies that he sees.	The student should be encouraged to look further for the answer to questions. He should read with this objective in mind; he must form some opinions of his own. These opinions may take the form of reviews of books and movies, and editorials for the school publication; or they may be presented to the class.
54. Expresses himself without restraint.	The "idea" is of prime importance. The student must strive to improve his grammar, but consciousness of his English limitations must not block his free expression. He should write and write and talk and talk when he has something to say.
55. Participates in and leads panel discussions.	A panel discussion is a good technique for promoting, reporting, and discussing any topic. The class should be divided into groups of four or five. Topics may be assigned to the group or selected by the members. The leader will plan the discussion, assign sub-topics to members for preparation, and be responsible for keeping the discussion from wandering or lagging while the group has the floor. Some member may be responsible for a bulletin board and other visual aids; other members may search for outside sources for use. A score chart should be set up by the teacher with the help of the students and placed on the blackboard. This chart should list the things that help to make a good panel discussion, such as audibility, speaking without notes, answering questions clearly, source material, and interest to the class. The panel may be scored by the teacher, a committee of students, or an invited guest. The discussion should be thrown open to the whole class at convenient intervals. The leadership and other

## SUGGESTED REFERENCES

56. **English in Action**, Course 1, 1955, pp. 212-223.  
**Everyday Living.** Goals 18, 19.
57. **Building Better English**, Book IX, 1955, pp. 163-164.  
Bell, John W., and others, **The English We Need.** The John C. Winston Co., Dallas, 1943, p. 379.
58. National Education Association, **Elementary-School Libraries Today.**  
Thirtieth Yearbook of the Department of Elementary School Principals,  
Vol. XXXI, No. 1, Washington, D. C.  
Film: **Know Your Library** 16 mm 10 minutes

55. (Cont'd)
- jobs in the group should rotate. All members of a group should receive the same score.
- This arrangement promotes group work and co-operation, and gives every student many chances to serve as a leader. The group may bring pressure to bear on an uncooperative student since students are judged as a group. Once this organization is set up in the classroom it can be used in any subject matter field. Preparation for new topics should get under way quickly.
56. Organizes and participates in forums, demonstrations, individual reports, plays, dramatizations.
- The student should use these oral media for expression in all his studies. He should be familiar with the techniques for setting up the class organization for such and go ahead on his own with little guidance.
57. Uses a colon before a formally introduced series.
- The student has had some use of the colon before this, and he has had experience in punctuating words in a series. This is a slightly advanced step.
58. Acts as assistant in the school library.
- At this level students under supervision can take over activities such as:
- a. Shelving books
  - b. Publishing a library bulletin
  - c. Using the card catalog
  - d. Listing names and addresses of source materials for the library
  - e. Planning and putting on a pageant for book week
  - f. Dramatizing books
  - g. Planning a book exhibit



## **GOALS**

### **LEVELS SEVEN, EIGHT, AND NINE**

#### **SCIENCE**



## SUGGESTED REFERENCES

1.   \***Everyday Science**, 1946, pp. 3-16.  
      \*\***General Science Made Easy**, 1942, pp. 14-16.  
      \*\*\***Science Problems I**, 1951, pp. 1-31.  
      \*\*\***Solving Science Problems Workbook, I**, Unit I, 1951, pp. 7-16.  
      Parker, Bertha Morris, **The Scientist and His Tools**. Row, Peterson and Co., Evanston, Ill., 1944.  
      Lynde, Carleton John, **Science Experiences With Home Equipment**. International Textbook Co., Scranton, Pa. 1949.
  
2. **Science Problems I**, 1951, pp. 80-103.  
    **Solving Science Problems Workbook I**, 1951, pp. 37-50.  
    Frasier, George W., and others, **How and Why Explorations**. L. W. Singer Co., Inc., Syracuse, N. Y., 1949, pp. 39-45.  
    **Everyday Science**, 1946, pp. 326-340.  
    Parker, Bertha Morris, **Matter and Molecules**. Row, Peterson and Co., Evanston, Illinois, 1947.  
    Films:   **Solids, Liquids, and Gases**           16 mm       10 minutes  
              **The Atom**                           16 mm       10 minutes  
    Filmstrips: **Elementary Science, Set III**  
                   No. 5   **All Matter Has Three Forms**  
                              **Chemistry, Set II**  
                              No. 1   **Structure of the Atom**
  
3.   Parker, Bertha Morris, **Community Health**. Row, Peterson and Co., Evanston, Ill., 1949.  
      Parker, Bertha Morris, **Water**. Row, Peterson and Co., Evanston, Ill.  
      Parker, Bertha Morris, **Water Supply and Sewage Disposal**. Row, Peterson and Co., Evanston, Ill., 1946.  
      \*\*\*\***Understanding Science**, 1940, pp. 226-228.  
      **Everyday Living**, Goal 40.  
      Films:   **Environmental Sanitation**           16 mm       8 minutes  
              **Basic Sanitation**
  
4.   Lynde, Carleton John, **Science Experiences With Home Equipment**. International Textbook Co., Scranton, Pa., 1949, pp. 90-139.  
      Parker, Bertha Morris, **Water**. Row, Peterson and Co., Evanston, Ill.  
      **Science Problems I**, 1951, pp. 120-141.  
      Film:   **Water**                           16 mm       10 minutes  
      Filmstrips: **General Science, Water; Foundation of Chemistry, Water**

---

\*Caldwell, Otis, W., and Curtis, Francis D., Ginn and Co., N. Y.

\*\*Masson, Louis T., Garden City, N. Y.

\*\*\*Beauchamp, Wilbur L., and others, Scott, Foresman and Co., Chicago.

\*\*\*\*Watkins, Ralph K., and Perry, Winifred, The Macmillan Co., N. Y.

1. Learns something about the scientific method in performing an experiment.

Have students go to the blackboard or write on paper the five steps which a scientist uses in performing an experiment.

Demonstrate before the class an experiment showing all five steps. Have each student perform a simple experiment, using all five steps. Some examples of experiments that the students can perform:

1. Which is heavier, milk or water?
2. How may oxygen be prepared?
3. Will iron oxidize?
4. Is there dust in ordinary air?
5. Does dry soil contain water?

2. Has some understanding of the composition of matter in relation to his immediate environment.

Have students bring to class samples of various kinds of matter.

Have students put on an exhibit with pictures, diagrams, and samples showing various kinds of matter.

Demonstrate before the class experiments to show how gases, liquids, and solids are different. Have students construct models and charts on the composition of matter, showing models of an atom and a molecule.

3. Knows where his community water supply comes from and how to dispose of sewage.

Find out from the class how they get their drinking water at home. Have some members of the class volunteer to tell how the school gets its water supply.

Find out how much water is consumed by the average person, by a city, or by a community in one day. Class discovers it is not always easy for a community or city to get as much water as it needs. The student learns that generally the water supply comes from two general sources; surface water (rivers, lakes, ocean) and ground water (artesian wells and springs).

Sewage contains waste materials from human and animal bodies. Find out the proper disposal of garbage, dishwater, and bath water. Study the proper location of a sewage disposal unit, whether outdoor toilet, septic tank or city sewage system, in relation to the water supply. A trip to the local sewage disposal plant is desirable.

4. Knows the forms of water.

Experiments to find the various forms water will take:

- a. Uses a watch glass and ether to change water to a solid.
- b. Brings water to a boiling point where it is changed to steam (kitchen tea kettle).

Discovers that temperature determines the various forms water will take.

## SUGGESTED REFERENCES

5. **General Science Made Easy**, 1942, pp. 78-79.  
 Craig, Gerald S., and Hyde, Margaret O., **New Ideas in Science**. Ginn and Co., Chicago, 1946, pp. 302-303.  
 \* **Classroom Activities Relating to Natural Resources**.  
 \*\* **Science for Daily Use**, 1940, pp. 130-133.  
 Films: **The Work of Running Water** 16 mm 10 minutes  
           **The Work of Rivers** 16 mm 10 minutes  
           **Erosion** 16 mm 10 minutes  
           **Grass Is Gold** 16 mm 15 minutes  
 Filmstrips: **Control of Water Erosion**  
                   **Wind Erosion**
  
6. **Everyday Living**. Goals 3, 5, 30.  
 Parker, Bertha Morris, **Water Supply and Sewage Disposal**. Row, Peterson and Co., Evanston, Ill., 1946.  
**Understanding Science**, 1940, pp. 109-113.
  
7. Parker, Bertha Morris, **Machines**. Row, Peterson and Co., Evanston, Ill., 1944.  
 Brandwein, Paul F., **You and Science**. Harcourt, Brace and Co., N. Y., 1955, pp. 434-442.  
**General Science Made Easy**, 1942, pp. 127-131.  
**Discovering Our World**, Book II, pp. 71-88.  
 Film: **Simple Machines** 16 mm 10 minutes  
           **Machines** 16 mm 10 minutes  
 Filmstrips: **Elementary Science**, Set II  
                   No. 5 **Simple Machines**  
                   **General Science**, No. 7, 8, 9  
                   **Levers, Inclined Planes, Pulleys, Wheels, and Axles**
  
8. Parker, Bertha Morris, **Electricity**. Row, Peterson and Co., Evanston, Ill.

---

\*Wight, Edgar, Bureau of Indian Affairs, Washington, D. C.

\*\*Watkins, Ralph K., and Perry, Winifred, The Macmillan Co., N. Y.

5. Knows the effects of wind and water erosion.

Students should become familiar at this point with the word **erosion** and its many implications.

After study and preparation, take field trips to areas where students can observe the effects of wind and water erosion.

Simple experiments can be set up in the classroom to show the effect of wind and water erosion by the use of soil in a container and the help of an electric fan and a water sprinkler.

Students can be impressed with the extreme losses of soil due to erosion by viewing some of the better films available.

It is hoped that all students may gain a respect for the soil and realize that, unless care is exercised in its use, rapid deterioration takes place. Soil building is a very slow process.

6. Understands how water helps in his daily living.

During one of the great oil booms in Texas a sudden water shortage became evident and soon a barrel of water became more valuable than a barrel of oil. Water helps man, plants, and animals grow. Water is a solvent and cleansing agent. Water is used in different ways to run machinery. (Demonstrate the use of water wheel as a source of power.) Water is a highway of transportation. Water is a cooling and heating agent. Water is the home of certain types of animal and plant life.

7. Understands how machines make work easier for man.

Pupils observe, discuss, and experiment with the six types of simple machines (screws, wheel-and-axle, gears, pulleys, levers, and inclined plane) in order to learn that complex machines are nothing more than combinations of simple machines; for example, in an airplane the propeller is a screw or inclined plane, the cam and drive shaft are levers, etc. Class discusses changes brought about in our lives by complex machines, such as the automobile and the airplane. Exhibit a collection of simple machines used in the home, such as can opener, bottlecap remover, and egg beater.

8. Knows the importance of electricity in our daily living.

Lightning is a huge spark of electricity. To get lightning, one must have a charge of electricity. An easy way to get a charge of electricity is by rubbing two different materials together.



## SUGGESTED REFERENCES

8. (Cont'd)
  - Electricity Around Us.** Dept. 2-119, Public Relations, General Electric Co., Schenectady, N. Y.
  - \***Discovering Our World,** 1947, Book III, pp. 121-156.
  - Film: **Electricity** 16 mm 10 minutes
  - Filmstrip: **General Science-Electricity**  
**Fundamentals of Electricity,** Set 1-21
  
9. Schneider, Herman, **Everyday Weather and How It Works.** Whittlesey House. McGraw-Hill Book Co., N. Y., 1951.  
 Parker, Bertha Morris, **Ask the Weatherman.** Row, Peterson and Co., 1947.  
 Parker, Bertha Morris, **The Ways of the Weather.** Row, Peterson and Co., 1947.  
**Science for Daily Use,** 1940, pp. 67-69.  
**Discovering Our World,** 1947, pp. 50-55.  
 Film: **Weather** 16 mm 10 minutes
  
10. Smith, Victor C., and Vance, B. B., **Science for Everyday Use.** J. B. Lippincott Co., Chicago, 1946, pp. 16-56.  
**Discovering Our World,** 1947, pp. 52-55.  
 Film: **Free Air** 16 mm 10 minutes  
       **Air** 16 mm 10 minutes  
 Filmstrip: **Aerodynamics:**  
               **Theory of Flight;** Set 1-4.
  
11. Parker, Bertha Morris, **Soil.** Row, Peterson and Co., Evanston, Ill.  
 Meister, Morris, and others, **Wonderworld of Science,** Book VIII, Charles Scribner's Sons, Chicago, 1948, pp. 97-105.  
**General Science Made Easy,** 1942, pp. 305-306.  
**Classroom Activities Relating to Natural Resources,** 1952.  
**Discovering Our World,** Book III, 1947, pp. 62-68.

---

<sup>†</sup>Beauchamp, Wilbur L., and others, Scott, Foresman and Co., Chicago.



8. (Cont'd)
- Examples: shuffling across a rug, combing hair, and rubbing one's hand against cat's fur. Actually this is frictional or static electricity. Have the class or group find out how electricity works for us. If electric current is available in the school, students may visit the kitchen, shop, and other places to get this information; otherwise, reference materials will provide the source. Emphasize that electricity is a source of power, light, heat. It makes possible communication by telegraph, telephone, radio, and television. Contrast the modern home with the home which is without electrical power.
9. Knows why the daily weather report is important.
- Read the weather forecasts in the daily newspaper and listen to radio weather reports, and check for accuracy against the actual weather. Use weather reports in planning for a picnic or trip. Discuss the importance of frost warnings to vegetable, fruit, and citrus growers. Study about the importance of weather reports to transportation companies, farmers, and others who are most affected by weather conditions. Visit the local weather bureau office to see the equipment and learn how it is used in weather forecasting.
10. Has some understanding of how air helps man in his daily living.
- List as many ways as possible in which man utilizes air pressure. Consider: machine power, windmills, sailboats, vacuum cleaners, plumbing, and steam power. Heat destroys much undesirable matter. Make and test models of windmills, sailboats, and gliders. Study and discuss air compressors and air pressure in tires. Discuss why a balloon floats and an airplane "flies." Air is necessary for plant and animal life. Try growing a plant in the absence of air.
11. Can tell what soil is composed of and how it is made.
- Examine different soil with a magnifying glass. Pick out pieces of rock, sand, and organic matter. The very fine material left is probably clay. Put soil in a jar, add water, and stir. Allow to settle over night. The coarsest material will settle to the bottom. Discuss the three classes of soil, namely: clay, sand, and loam. All other soils are combinations of these three classifications. Loam is a mixture of clay, silt, and sand, and decayed plants or animals.
- Place small, thin layer of loam over fire and have class observe how it changes in color as organic matter burns.

SUGGESTED REFERENCES

11. (Cont'd)  
Filmstrips:   **Soil Conservation**  
                  No. 1 **How Soil is Formed**  
                  No. 2 **Water and the Soil**  
                  No. 3 **Minerals in the Soil**  
                  No. 4 **Plant Life and the Soil**  
                  No. 5 **Animal Life and the Soil**

12. Parker, Bertha Morris, **Garden Indoors.** Row, Peterson and Co., 1944.  
     **General Science Made Easy,** 1942, pp. 291-300.  
     **Discovering Our World,** 1947, pp. 183-208.  
     Parker, Bertha Morris, **An Aquarium.** Row, Peterson and Co., Evanston, Ill., 1948.  
     Brandwein, Paul F., **You and Science.** Harcourt, Brace and Co., N. Y., 1955, pp. 387-388; 390-397; 404-406.  
Films:   **Animals Growing Up**                   16 mm       10 minutes  
          **Plant Growth**                           16 mm       10 minutes  
Filmstrips: Elementary Nature Study:  
              No. 1 **The Growing-Up of the Toad**  
              No. 1 **The Growing-Up of the Monarch Butterfly**

11. (Cont'd)
- Weigh before and after. The greater part of soil is ground-up rock. Rocks are continually being broken up into soil by the various forces of nature. Weather and climate are the mills which have done much of this. The movement of water over rocks and the action of freezing are some ways in which soil is made. The action of the wind is another factor in soil formation. Adding plant and animal matter gives the soil body and provides it with the additional elements necessary for growth.
12. Knows how plants and animals grow.
- Plant seeds, cuttings, bulbs, slips, or leaves and observe growth. Pupils should know parts of a plant. Find out which parts are used for food. Show pictures of plant and animal growth. Read stories about growth of animals, such as frogs, moths, and various insects. Let pupils see toad or frog eggs and caterpillar cocoons hatch and the young grow to maturity. Bring in goldfish or pets for observation. Use a terrarium and aquarium to observe birth and growth of plants and animals.

## SUGGESTED REFERENCES

13. \* **Everyday Science**, 1946, pp. 3-12.  
       Smith, Victor C., and Jones, W. E., **Enjoying Modern Science**. J. B. Lippincott Co., Chicago, 1951, pp. 2-19.
- \*\* **You and Science**, 1955, pp. 1-32.  
       Parker, Bertha Morris, **Superstition or Science**. Row, Peterson and Co., Evanston, Ill., 1948.  
       Brandwein, Paul F., **You and Your World**. Harcourt, Brace and Co., Chicago, 1953, pp. 43-50.  
       Filmstrips: **Edward Jenner and the Story of Vaccination**, No. 2  
                   **Louis Pasteur and the Germ Theory of Infection**, No. 6
  
14. \*\*\* **Understanding the Universe**, 1943, pp. 49-55.  
       Brooks, William O., and Tracy, George R., **Modern Physical Science**. Henry Holt and Co., N. Y., pp. 243-246.
- \*\* **Science for Better Living**, 1942, pp. 203-208.  
       Parker, Bertha Morris, **Fire, Friend and Foe**. Row, Peterson and Co., Evanston, Ill., 1948.  
       Davis, Ira C., and others, **Science, A Story of Observation and Experiment**, Book I. Henry Holt and Co., N. Y., 1954, pp. 1-36.  
       Film: Fire           16 mm       10 minutes
  
15.     Parker, Bertha Morris, **What Things Are Made Of**. Row, Peterson and Co., Evanston, Ill., 1944.  
       **Everyday Science**, 1946, pp. 330-332.  
       **You and Science**, 1955, p. 281.
- \*\*\*\* **Science Problems 1**, 1951, pp. 142-177.
- \*\*\*\*\* **New World of Science**, 1953, pp. 181-182.  
       Filmstrips: **Foundations of Chemistry**:  
                   No. 2 **Carbon and Its Oxides**  
                   No. 3 **Chlorine and Its Compounds**

---

\*Caldwell, Otis W., and Curtis, Francis D., Ginn and Co., Chicago.  
 \*\*Brandwein, Paul F., and others. Harcourt, Brace and Co., N. Y.  
 \*\*\*Carroll, Franklin B., and others. The John Winston Co., Chicago.  
 \*\*\*\*Beauchamp, Wilbur L. Scott, Foresman and Co., Chicago.  
 \*\*\*\*\*Burnett, R. Will, Silver Burdett Co., Chicago.

13. Develops the idea that science may displace superstition and ignorance.	<p>Have students list many of the most common superstitions and have them give reasons to support these beliefs. Have students discuss and write on "What the World Would Be Like If Nobody Knew Anything About Science." Have students collect pictures showing how science has changed the world.</p> <p>Have students choose projects comparing the old and new scientific ways of doing things. Have students compare the superstitious way of treating diseases with that of today. Have students test some common ideas or statements to see if they are correct. If a statement or belief is incorrect, find some other explanation.</p> <p>Experiment with some common instruments to see how these instruments help individuals to see, hear, or measure better. Take some class or pupil problems and follow through, using the scientific method. Show how scientists, by solving certain problems, cause new problems to arise.</p>
14. Understands how fires can be extinguished.	<p>Puts out small fires by using sand, water, etc. Understands that fires are extinguished by a lack of oxygen. Knows and observes the use of the common types of fire extinguishers. Finds out what type of fire extinguisher to use in various places. Put a small amount of oil in a flat pan. Pour water on this oil and note how it spreads. Discuss how various types of fires may be extinguished. Gasoline fires are not extinguished by water, but wood fires are. Call in local fire chief for demonstration.</p>
15. Knows something about chemical changes.	<p>Have students collect pictures showing all kinds of chemical changes. Have students do all kinds of simple experiments to show various types of chemical changes.</p> <p>Examples:</p> <p>What happens when wood is heated?  What happens when iron changes to rust?  What happens when a match burns?  What happens when we eat food?  What happens when plants make food?  What happens when we breathe?  What happens when sugar burns?  Dissolve baking soda in a glass of lemon juice.  Put some vinegar in a glass full of baking soda.</p>



SUGGESTED REFERENCES

16. **Science Problems 1**, 1951, pp. 104-145.  
Lynde, Carleton John, **Science Experiences with Home Equipment**. International Textbook Co., Scranton, Pa., 1949.  
\* **Heat**, 1942.  
**Everyday Science**, 1946, pp. 110-167.  
Schneider, Herman, **Everyday Weather**. Whittlesey House Book, McGraw-Hill Book Co., N. Y., pp. 30-46.  
Brandwein, Paul F., **You and Your World**. Harcourt, Brace and Co., Chicago, 1953, pp. 227-237.

17. \*\* **Classroom Activities Relating to Natural Resources**, 1952.  
Parker, Bertha Morris, **Soil**. Row, Peterson and Co., Evanston, Ill.  
Gustafson, A. F., **Conservation in the United States**. Comstock Pub. Co., Inc., Ithaca, N. Y., 1939.  
Filmstrip **Soil Conservation Set**

18. Parker, Bertha Morris, **Water Supply**. Row, Peterson and Co., Evanston, Ill., 1946.  
Parker, Bertha Morris, **Water**. Row, Peterson and Co., Evanston, Ill.  
\*\*\* **Wonderworld of Science**, Book VII, 1948, pp. 86-96.  
Watkins, Ralph K., and Perry, Winifred, **Science for Daily Use**. The Macmillan Co., N. Y., 1940, pp. 138-141.  
Filmstrips: **Foundations of Chemistry:**  
No. 10 **Water**  
**General Science:**  
No. 11 **Water**  
Films: **Clean Waters** 16 mm 10 minutes  
**Environmental Sanitation** 16 mm 8 minutes

\*Parker, Bertha Morris. Row, Peterson and Co., Evanston.  
\*\*Wight, Edgar L., Bureau of Indian Affairs, Department of the Interior, 1952, Washington, D. C.  
\*\*\*Meister, Morris and others. Charles Scribner's Sons, Chicago.

<p>16. Knows something about how heating and cooling change material.</p>	<p>Have students collect pictures or draw illustrations showing how heating and cooling change materials; such as water changing into steam or ice, cream changing into ice cream, glass bending, etc. Have students burn sugar to notice the slow browning. To prove that steam is really water, hold a watch glass or plate over a beaker when it starts to steam. Bend glass over fire.</p> <p>Place ice in water and test temperature before and after. Fill bottle with water or milk and freeze to show expansion. To determine the rate of expansion, heat a wire along its whole length and measure the wire before and after heating.</p> <p>Heat a certain volume of water and show how heating increases its volume. Heat a certain volume of air and show how its volume has changed. Have students perform an experiment on the melting point of various materials, such as butter, lead, and plastic. Have students evaporate various substances, such as hot water, cold water, alcohol, ether, etc., to see if all liquids evaporate at the same rate. Perform an experiment to show what happens when steam is cooled.</p>
<p>17. Participates in the local community conservation program.</p>	<p>Read pamphlets, charts, and graphs on the subject. Attend demonstrations. Construct table models showing certain aspects of programs. Visit projects and learn about local conditions and plans for conservation by officials from SMOCO Staff. Enter poster contests. Give demonstrations.</p>
<p>18. Knows how water can be contaminated and understands how it can be purified.</p>	<p>Students should know that drinking water is not chemically pure. It should meet these standards, however:</p> <ol style="list-style-type: none"> <li>1. Safe to drink</li> <li>2. Clear and colorless</li> <li>3. Free from disagreeable taste and odor</li> <li>4. Reasonably soft</li> </ol> <p>Have members of the class observe a glass of pure water (safe for drinking) and a glass of impure water. Notice that both look the same. After bacteria have been given sufficient time to grow and multiply, examine the water from the two glasses under a microscope. If a microscope is not available, use film strips, slides, charts, and illustrations from various references.</p>

SUGGESTED REFERENCES

19. **Classroom Activities Relating to Natural Resources**, 1952.  
Frasier, George and others, **How and Why Discoveries**. L. W. Singer Co., Syracuse, N. Y., 1949, p. 294.  
\* **New Ideas in Science**, 1946, pp. 307-325.  
Filmstrips: **Soil Conservation Set:**  
                  **Control of Water Erosion**  
                  **Wind Erosion**  
Films: **Grassland** 16 mm 10 minutes  
          **The River** 16 mm 31 minutes  
          **Trees to Tame the Wind** 16 mm 12 minutes

20. **Wonderworld of Science**, 1948. pp. 60-61; 108-110; 198-213.  
Parker, Bertha Morris, **Machines**. Row, Peterson and Co., 1944.  
Schneider, Herman, **Everyday Machines and How They Work**. Whittlesey House, McGraw-Hill Book Co., Inc., N. Y. 1950.  
\*\* **General Science Made Easy**, 1942.  
\*\*\* **Discovering Our World**, 1947, Book II, pp. 72-93.  
Filmstrips: **General Science**  
                  No. 7 **Levers**  
                  No. 8 **Inclined Plane**

---

\*Craig, Gerald S. and Hyde, Margaret Oldroyd, Ginn and Co., Chicago.  
\*\*Masson, Louis T., Garden City Pub. Co., Inc., Garden City, N. Y.  
\*\*\*Beauchamp, Wilbur L., and others. Scott, Foresman and Co., Chicago.

18. (Cont'd)	<p>Class should study and discuss the various ways water can be contaminated. Mud, living organisms, decaying plant and animal materials, and dissolved minerals are sources of water contamination. Some water impurities are dissolved, while others, such as mud, are suspended and visible to the naked eye. Usually ground water is a safer source of pure drinking water than surface water.</p> <p>Discuss the many ways to prevent contamination of pure water. Special attention should be given to using clean containers and individual drinking cups and to locating the well above and at least fifty-feet away from contaminated areas. Water should be stored in covered barrels or other containers.</p> <p>Boil impure water and examine it under a microscope. Point out to the class that boiling is the simplest means of water purification. Find out how the school's water supply is purified. Familiarize students with the procedure of getting a water sample tested by the State health department. If possible, take a field trip to a town or city water purification plant.</p>
19. Knows some of the ways to prevent soil erosion.	<p>Have students observe what happens when water passes over a surface free from plant growth. Emphasize the importance of good plant growth in preventing soil erosion.</p> <p>Have members of the class look up and report on various ways soil erosion can be prevented. See which ones are practiced in their community. Emphasize again that once soil is lost it is difficult to reclaim. Over-grazing should be studied and discussed thoroughly, because much of our Indian land has been lost by this practice. Find out from a reliable source how many sheep, cattle, or other animals can be carried on an acre of land in their home community.</p>
20. Understands the operation of simple machines.	<p>At this level the pupils study and experiment with each of the six simple machines to learn how they operate to make work easier.</p> <ol style="list-style-type: none"> <li><b>The Wheel</b> — Learns that wheels may be linked in trains by belts to gain advantage of direction and speed. <ol style="list-style-type: none"> <li>Arrange wheels to turn by belts. Study pumps, harvester and other equipment that is belt driven.</li> <li>Examine and study old automobile gears.</li> </ol> </li> </ol>

SUGGESTED REFERENCES

20. (Cont'd)	No. 9	<b>Pulleys, Wheels, and Axles</b>		
Films:	<b>Machines</b>	16 mm	10 minutes	
	<b>Simple Machines</b>	16 mm	10 minutes	



20. (Cont'd)

2. **Pulleys** — Stress the principle that pulleys multiply force—give mechanical advantage.
  - a. Use spool pulleys or small models to form many combinations.
  - b. Pupils should understand that the advantage of a pulley system is approximately equal to the number of strands supporting the load.
3. **Levers** — Make clear by experimentation and observation that levers have a mechanical advantage or speed according to type. Use a yardstick for a lever and demonstrate the three kinds of levers. Make lists of each type found in everyday use, such as: first class lever—seesaw; second class—wheelbarrow; and third class—shovel.
4. **Inclined Plane** — Experiment with it from gentle to steep inclines to find the mechanical advantage. Discuss how this device can make our work easier. List examples of the use of this machine in industry. Pupils should find out that wedges are special inclined planes used to help push things apart. Use wedge to split wood. List and study advantages of common wedge-type machines, such as knives, chisels, and axes.
5. **Screws** — Teach that the screw usually combines the wedge, the inclined plane, and the wheel and axle. List and study common examples of screw-type machines which make work easier (car jack). Discuss screws as fasteners in wood and metal.
6. **Gears** — Find out how gears multiply force and may be used to gain speed. Examine old clock gears, auto gears, or others. See how they move each other in turn. Notice how a small gear sometimes turn a large one and this, in turn, turns a still larger one. If the small one has 12 teeth and the large one 24, a force on the small one is multiplied two times by the larger.

Examine a bicycle or some other machine in which a large gear is used to turn a small one. Turn the large gear and note the speed of the large wheel attached to the small gear.

## SUGGESTED REFERENCES

21. Parker, Bertha Morris, **Magnets**. Row, Peterson and Co., Evanston, Ill., 1947.  
\***Electricity**, 1944.  
**Discovering Our World**, 1947, pp. 139-153.  
Film: **Magnets** 16 mm 13 minutes  
Filmstrips: **Elementary Science, Set I:**  
No. 1 **Magnets**  
**Fundamentals of Electricity:**  
No. 1 **Magnetism**
22. **Electricity**, 1944.  
Adventures in Science Series, **Electricity Around Us**. Dept. 2-119, Public Relations, General Electric Co., Schenectady, N. Y.  
**The Romance of Electricity**. Dept. 2-119, Public Relations, General Electric Co., Schenectady, N. Y.  
Watkins, Ralph K., and Perry, Winifred, **Science for Human Control**. The Macmillan Co., N. Y., 1940, pp. 432-433.  
\*\***General Science Made Easy**, 1942, pp. 197; 200-202; 210.  
Film: Development of Communication 16 mm 10 minutes  
Filmstrips: **Fundamentals of Electricity:**  
No. 4 **The Electric Cell**  
No. 5 **Storage Battery**  
No. 6 **Electromagnetism**  
**Electrical Series - d.**  
**Electromagnetism**, Parts 1, 2
23. Abraham, Marcus, **Physics for Modern Times**. Prentice-Hall, Inc., N. Y., 1952, pp. 165-176.  
**Science for Better Living**, 1952, pp. 144-149.  
Parker, Bertha Morris, **Our Ocean of Air**. Row, Peterson and Co., Evanston, Ill., 1941.  
Lynde, Carleton John, **Science Experiences with Home Equipment**. International Textbook Co., Scranton, Pa., 1949.  
**New Ideas in Science**, 1946, pp. 201-237.  
Brandwein, Paul F., **You and Your World**. Harcourt, Brace and Co., Chicago, 1953, pp. 238-256.  
Filmstrips: **General Science:**  
1. **Air**  
**Foundations of Chemistry:**  
1. **Atmosphere**

---

\*Parker, Bertha Morris. Row, Peterson and Co., Evanston, Ill.

\*\*Beauchamp, Wilbur L., and others. Scott, Foresman and Co., Chicago, Ill.

21. Observes how magnets work.

Keep the concepts simple. Develop the concept that a simple magnet is a piece of iron which will attract or pick up other pieces of iron.

Secure horseshoe and bar magnets and experiment to see what materials can be magnetized.

Make a compass by magnetizing a darning needle. Lay it across a cork in a pan of water and watch it take a north-south direction. Examine and learn to use a real compass. Develop the concept that the compass is a magnet with the north and south magnetic poles and magnetic lines of force.

22. Understands the electro-magnet and dry and wet battery cells.

Make a small electromagnet by wrapping several feet of insulated wire around an iron bolt and fastening the two ends of the wire to a dry cell. Use the magnet to move a pile of iron filings or tacks. Bring out the fact that electromagnets are made stronger by using more coils and by sending stronger currents through the wire.

Find an old telephone receiver and look for electromagnets used to move heavy objects like locomotives and other large masses of iron.

Take a dry cell apart to see and study the chemicals, the carbon rod, and the zinc caps which generate the electricity. Show how the wires must be connected to the two posts on the cell before electricity is generated.

Examine a section of a wet storage battery to learn the parts and how they store electricity. Ask a mechanic to explain how a car battery is recharged.

23. Learns how man uses air.

Make a chart with pictures showing man's use of air. Make small models of machines that use air pressure (windmills, airplanes).

Prepare a list of animals that make use of air pressure to move from place to place, such as bats, birds, and insects.

Read and see films and filmstrips for information about the use of air in air brakes, vacuum cleaners, and tires.

## SUGGESTED REFERENCES

24. **General Science Made Easy**, 1942, p. 258.  
**Understanding the Universe**, 1952, pp. 530-541.  
**Everyday Science**, 1946, pp. 272-278.  
**You and Science**, 1955, pp. 243-253.  
 Films: **The Earth in Motion** 16 mm 10 minutes  
           **What Causes the Seasons** 16 mm 10 minutes  
 Filmstrips: **The Four Seasons Set**  
                   **Elementary Science**, Set II, No. 4  
                   **Seasons**
  
25. Parker, Bertha Morris, **Garden Indoors**. Row, Peterson and Co., Evanston, Ill., 1944.  
 \***Science Plans for Tomorrow**. 1946, pp. 359-391.  
 Watkins, Ralph K., and Perry, Winifred, **Understanding Science**. The Macmillan Co., N. Y. 1940, pp. 197-215.  
**The Wonderworld of Science**, Book VIII, 1947, pp. 105-106.  
**Discovering Our World**, Book III.  
 Smith, Ella Thea, **Exploring Biology**. Harcourt, Brace and Co., Chicago, 1954, pp. 502-539.  
 Film: **Yours Is the Land** 16 mm 20 minutes  
 Filmstrip: **Soil Conservation Set**, Nos. 1-8
  
26. Parker, Bertha Morris, **Garden Indoors**. Row, Peterson and Co., Evanston, Ill., 1944.  
**The Wonderworld of Science**, 1948, Book III, pp. 142-147; 152-165.  
 \*\***Science, A Story of Experiment and Discovery**, 1954, pp. 195-234.  
 \*\*\***Biology and Human Progress**. pp. 252-284.  
 Films: **Plant Growth** 16 mm 10 minutes  
           **Seed Dispersal** 16 mm 11 minutes  
           **Growth of Flowers** 16 mm 10 minutes  
 Filmstrip: **Grafting and Budding Fruit Trees**

---

\*Craig, Gerald S., and Urben, John, Ginn and Co., Chicago.

\*\*Davis, C. I., and others, Henry Holt and Co., N. Y.

\*\*\*Eisman, Louis, and Tanzer, Charles, Prentice-Hall, Inc., N. Y.



- |  |   |
|--|---|
| <p>24. Understands why we have seasonal changes.</p>         | <p>Have the pupils perform the following experiment in order to discover that the two important ways the earth moves cause the change of seasons: Place a small electric light in the middle of a room. Draw a large circle and notice that the axis will slant at an angle to the ceiling. Move the globe around the circle so that different parts of the globe are lighted. Point out that at any chosen point on the globe, the angle at which the light strike it changes as the globe revolves. This experiment shows that the amount of heat received from the sun changes from day to day because of the change in angle at which heat rays strike the earth. Pupils should then discover that the seasons are caused by this change in temperature. By tilting the axis so that the light is nearly overhead, the summer season can be demonstrated. In a like manner it can be shown that winter is the season when the sun is nearer the horizon. Use charts, maps, and diagrams to clarify this experiment and its meanings for the pupils.</p> |
| <p>25. Realizes that we depend on the soil for a living.</p> | <p>The pupils should learn that all life upon the earth depends directly or indirectly on the soil. They can make charts with pictures of things coming directly or indirectly from the soil. Make use of visual aids, such as films and film strips. Select something that does not come directly from the soil, like wool clothing. Point out how plants provide food for sheep raised for their wool.</p>  |
| <p>26. Understands the origin of plants.</p>                 | <p>Pupils may plant seed, cuttings, runners, buds, bulbs, and root cuttings, both indoors and out to learn how new plants are grown. This experiment will demonstrate how potatoes are grown: put a white potato in a jar of water, covering only one end with water. Pupils should observe the potato over a period of a few weeks to find the answers to questions, such as: What happens at the eyes of the potato? Why is the potato shriveling and getting smaller?</p> <p>Have pupils cut an onion, bean, and a peanut in two; notice the tightly folded bud in the center and the many layers of stored food around the bud. Call attention to this means of supplying food to the bud until it grows into a young plant and can take food from the soil.</p> <p>Make a cutting from a geranium and watch it grow.</p> <p>Read about Luther Burbank and his work with plants.</p>  |



## SUGGESTED REFERENCES

27. **Discovering Our World**, Book III, 1947, pp. 256-266.  
**The Wonderworld of Science**, Book VIII, 1948, pp. 166-167.  
**Science, A Story of Experiment and Discovery**, 1954, pp. 235-270.  
**Biology and Human Progress**, pp. 252-284.
- |        |                                |       |            |
|--------|--------------------------------|-------|------------|
| Films: | <b>Miracle of Life</b>         | 16 mm | 11 minutes |
|        | <b>In the Beginning</b>        | 16 mm | 20 minutes |
|        | <b>The Frog</b>                | 16 mm | 11 minutes |
|        | <b>Introduction to Biology</b> | 16 mm | 10 minutes |
- Filmstrip: **Human Body**, Series I:  
**Reproduction Among Mammals**
28. **Wonderworld of Science**, Book VIII, 1948, pp. 278-279.  
**Discovering Our World**, Book II, 1947, pp. 239-245.  
**Science Plans for Tomorrow**, 1946, pp. 382-385.  
**Biology and Human Progress**, pp. 332-357.
- |        |                                 |       |            |
|--------|---------------------------------|-------|------------|
| Films: | <b>Achievement</b>              | 16 mm | 10 minutes |
|        | <b>Heredity</b>                 | 16 mm | 11 minutes |
|        | <b>Heredity and Environment</b> | 16 mm | 10 minutes |
- Filmstrip: **Human Body**, Series II:  
**Heredity**
29. **Science Plans for Tomorrow**, 1946, pp. 378-382; 385-387.  
**Everyday Science**, 1946, pp. 461-475.  
**Biology and Human Progress**, 1953, pp. 332-357.
- |       |                                 |       |            |
|-------|---------------------------------|-------|------------|
| Film: | <b>Heredity and Environment</b> | 16 mm | 10 minutes |
|-------|---------------------------------|-------|------------|
- Filmstrip: **Human Body**, Series II:  
**Heredity**
30. Parker, Bertha Morris, **Light**. Row, Peterson and Co., Evanston, Ill., 1949.  
**You and Science**, 1955, pp. 527-540.  
**The Wonderworld of Science**, Book VIII, 1948, pp. 306-319.  
Burnett, R. Will, **New World of Science**, Silver Burdette Co., N. Y., 1953, pp. 451-461.
- |        |                                   |       |            |
|--------|-----------------------------------|-------|------------|
| Films: | <b>Light Waves and Their Uses</b> | 16 mm | 11 minutes |
|        | <b>Nature of Color</b>            | 16 mm | 10 minutes |
- Filmstrip: **General Science**:  
**Light**

26. (Cont'd)	<p>Look at some plants that have bloomed. Select some of the parts of the flower that are still left on the plant. Open these parts and find the seeds.</p>
27. Understands the origin of animals.	<p>Get some frog's eggs from a pool. Keep them in pond water in the classroom for further observation and report to the class.</p> <p>Find out how long it takes a hen's egg to hatch.</p> <p>Find insect eggs for observation and discussion purposes.</p> <p>After and during periods of experimentation, the pupils should be able to answer questions such as the following:</p> <ol style="list-style-type: none"> <li>1. How is a bird's egg like the seed of a plant?</li> <li>2. How does every living thing begin its life?</li> <li>3. How do living things grow bigger?</li> </ol> <p>Make a list of animals and have pupils name animals that are born alive. Then list those that hatch from eggs.</p>
28. Has some understanding of methods used in improving plants.	<p>Visit farm, garden or nursery and learn what is being done to improve plants.</p> <p>Read Department of Agriculture pamphlets and bulletins.</p> <p>Study seed catalogs to find out how vegetables and flower seeds have been improved to meet various conditions of soil, climate, and disease resistance.</p>
29. Has some understanding of methods used to improve animals.	<p>Have class visit a farm and see the difference between a good and a poor animal. Notice the characteristics of animals with good breeding.</p>
30. Understands how light affects our everyday living.	<p>Learns that light is a form of energy and that it always travels in straight lines. Demonstrate by cutting holes in the center of two small pieces of cardboard. Hold the two pieces of cardboard so that light passes through both openings. Move one cardboard to the right or left and notice how the light is shut off.</p>

SUGGESTED REFERENCES

31. **Discovering Our World**, Book II, 1947.  
Watkins, Ralph K., and Perry, Winifred, **Science for Human Control**.  
The Macmillan Co., 1940, pp. 409-413.  
**New World of Science**, 1953, pp. 441-449.  
**Heat**, 1942.  
Film: **Fuels and Heat** 16 mm 10 minutes  
Filmstrip: **General Science:**  
**Fire and Heat**

30. (Cont'd)
- Find out that light colors reflect more light than dark colors. Take the class into a room painted with light colors and another room painted with dark colors. If a light meter is available, measure the light intensity in each room.
31. Understands how heat affects our everyday living.
- Make a survey of your school or community to determine the different ways heat is obtained and how it is used. Study and discuss the most common ways, such as electricity, gas, gasoline, coal, wood, coal oil, and the sun. Demonstrate heat by friction. (Rub two pieces of wood together.)

## SUGGESTED REFERENCES

32. Parker, Bertha Morris, **An Aquarium.** Row, Peterson and Co., Evanston, Ill., 1943.
- \* **Science Problems I**, 1951, pp. 260-287.
- Smith, Victor C., and Jones, W. E., **Enjoying Modern Science.** J. B. Lippincott Co., Ill., 1951, pp. 380-411.
- Smith, Victor C., and Jones, W. E., **Using Modern Science**, Book IX, J. B. Lippincott Co., Chicago, 1951, pp. 513-566.
- \*\* **Everyday Science**, 1946, pp. 415-460.
- Smith, Ella Thea, **Exploring Biology.** Harcourt, Brace and Co., Chicago 1954, pp. 4-47.
- Fitzpatrick, Frederick L., and Bain, Thomas D., **Living Things.** Henry Holt and Co., N. Y., 1953, pp. 30-33.
- Films: **In the Beginning** 16 mm 17 minutes
- Introduction to Biology** 16 mm 13 minutes
33. Parker, Bertha Morris, **Gravity.** Row, Peterson and Co., Evanston, Ill., 1942.
- Beauchamp, Wilbur L., and others. **Science Problems II.** Scott, Foresman and Co., Chicago, 1952, pp. 42-85.
- Everyday Science**, 1946, pp. 71; 241-242; 290; 297-302; 335-336; 465-466.
- Smith, Victor C., and Jones, W. E., **Using Modern Science.** J. B. Lippincott Co., Chicago, 1951, pp. 28; 40; 60; 420-422; 443; 453.
- Film: **Force of Gravity** 16 mm 10 minutes
- Filmstrips: **Elementary Science**, Set III:  
**Why Things Float**
- Elementary Science**, Set IV:  
**Gravity**
- Elementary Science** Series:  
**The Force of Gravity**
34. Brandwein, Paul F., **You and Your World.** Harcourt, Brace and Co., Chicago, 1953, pp. 19-62.
- Lynde, C.J., **Science Experiences With Home Equipment.** International Textbook Co., 1001 Wyoming Ave., Scranton, Pa., 1949.

\*Beauchamp, Wilbur L., and others. Scott, Foresman and Co., Chicago.  
\*\*Caldwell, Otis W., and Curtis, Francis D., Ginn and Co., N. Y.



32. Knows something about how living things are alike.

Take field trips to study plants and animals. Have a balanced aquarium in the classroom. Grow all kinds of plant life in the classroom. Have students collect all kinds of animals to study in jars, bottles, cages, etc., such as insects, lizards, snakes, birds, aquatic insects, water dogs, frogs, and worms. Construct a terrarium in the classroom with all kinds of ferns and mosses growing.

Collect pictures to show all kinds of plant and animal partnerships. Have students look at plant and animal cells under the microscope. Have students do all kinds of experiments to show how plants and animals carry on the same living processes in life.

Have students prepare charts and diagrams showing what elements and compounds are found in the animal and plant bodies.

33. Understands how gravity is useful to us.

Have students collect pictures showing how gravity is useful to us in measuring materials, causing water pressure, causing air pressure, and making things float.

Have students perform various experiments showing how gravity is useful to us.

Demonstrate how materials are weighed using the English and metric systems. Demonstrate how the density of common materials can be determined.

Have students perform experiments on how water pressure can be determined.

Have students perform experiments on what causes air pressure.

Have students perform an experiment on what makes things float.

34. Can perform an experiment and begins to do scientific research independently.

Have students choose topics that they are interested in and have them work out experiments in that subject. Assign various topics to the class and have them go to the library and find out all the facts about the topic.

## SUGGESTED REFERENCES

34. (Cont'd)

\* **General Science Made Easy**, 1942.

**Everyday Science**, 1946, pp. 610-626.

\*\* **You and Science**, 1955, pp. 17-32.

Frank, J. O., **Mystery Experiments and Problems for Science Classes**, J. O. Frank and Sons, Oskosh, Wisconsin, 1945.

Curtis, Francis D., and Urban, John, **Biology in Daily Life**. Ginn and Co., Chicago, 1949, pp. 570-571.

Filmstrips: **Robert Koch and the Discovery of the Tubercle Baccillus**  
**Louis Pasteur and the Germ Theory of Infection**  
**Foundations of Chemistry - No. 4 Facts and Laws**

35. Parker, Bertha Morris, **Beyond the Solar System**. Row, Peterson and Co., Evanston, Ill., 1947.

Parker, Bertha Morris, **The Sun and Its Family**. Row, Peterson and Co., Evanston, Ill., 1947.

Parker, Bertha Morris, **The Sky Above Us**. Row, Peterson and Co., Evanston, Ill., 1947.

**Everyday Science**, 1946, pp. 238-291.

Carroll, Franklin, **Understanding the Universe**. The John C. Winston Co., Chicago, pp. 509-545.

Parker, Bertha Morris, **The Earth's Nearest Neighbor**. Row, Peterson and Co., Evanston, Ill., 1947.

Davis, C. I., and others, **Science, A Story of Experiment and Discovery, Book II**. Henry Holt and Co., N. Y., 1954, pp. 93-132.

Films: **Earth in Motion** 16 mm 11 minutes

**Sun, Earth and Moon** 16 mm 11 minutes

**Solar Family** 16 mm 11 minutes

Filmstrips: **Elementary Science**, Set II:

No. 3 **Moon**

No. 6 **Solar System**

36. Smith, Victor C., and Jones, W. E., **Enjoying Modern Science**. J. B. Lipincott Co., Chicago, 1951, pp. 22-97.

**You and Science**, 1955, pp. 295; 304-307; 435-437; 469; 477-478; 530; 582-583.

Beauchamp, Wilbur L., and others, **Science Problems II**. Scott, Foresman and Co., 1952, pp. 4-41.

Davis, C. I., and others, **Science, A Story of Experiment and Discovery, Book II**, Henry Holt and Co., N. Y., 1954, pp. 33-36.

---

\* Masson, Louis T. McGraw-Hill Book Co., N. Y.

\*\* Brandwein, Paul F., Harcourt, Brace and Co., N. Y.

GOAL	LEVEL NINE	SUGGESTED ACTIVITIES AND TECHNIQUES
34. (Cont'd)		<p>Have students construct models, charts, drawings on various scientific subjects discussed in class.</p> <p>Have students work on some scientific project and plan to have the work exhibited at some class or school fair.</p> <p>Have students list all the references they can find about certain topics.</p>
35. Has some understanding of how the earth is related to other heavenly bodies.		<p>Locate and know something about the probable size and position in relationship to our Earth of such celestial bodies as North Star, Venus, Mars, Jupiter, Saturn, Pluto, Moon, and Sun.</p> <p>If possible, visit an observatory, museum or planetarium for information. Write for teaching materials.</p> <p>Use films, filmstrips, models, and pictures.</p> <p>Have students construct a table model of the Solar System showing the relative position of the planets and distances between them by using a scale.</p> <p>Have students observe the sky at night to locate various stars.</p>
36. Has some understanding about the different forms and sources of energy.		<p>Take a field trip to observe work being done.</p> <p>Have students collect pictures on all things that require energy to move, such as planes, cars, ships, animals, machines, people, buses, trains, etc.</p> <p>Have students learn the differences between energy and matter by illustrations and diagrams.</p> <p>Have students do various things in class; then ask them to tell what kind of energy was required.</p> <p>Have students make a drawing, illustrating how the sun is the source of all energy on the earth.</p>

## SUGGESTED REFERENCES

36. (Cont'd)  
 Film: **Energy** 16 mm 8 minutes  
 Filmstrip: **General Science**  
                   No. 3. **Energy**
37. Parker, Bertha Morris, **Animal World**. Row, Peterson and Co., Evanston, Ill., 1949.  
 Parker, Bertha Morris, **Living Things**. Row, Peterson and Co., Evanston, Ill., 1941.  
**You and Science**, 1955, pp. 425-431.  
**Science Problems I.**, 1951, pp. 32-37.  
 Hegner, Robert, **The Parade of the Animal Kingdom**. The Macmillan Co., N. Y., 1936.  
 Fritzpatrick, Frederick L., and Bain, Thomas D., **Living Things**. Henry Holt and Co., N. Y., 1953, pp. 33-37.  
 Films: **Introduction to Biology** 16 mm 13 minutes  
           **Beach and Sea Animals** 16 mm 11 minutes  
           **Mammals Are Interesting** 16 mm 12 minutes  
           **Insect Zoo** 16 mm 11 minutes
38. Abraham, Marcus, **Physics for Modern Time**. Prentice-Hall, Inc., N. Y., 1952, pp. 165-176.  
 Parker, Bertha Morris, **Science Experiences** (Elementary School). Row, Peterson and Co., Evanston, Ill., 1952, pp. 24-81.  
 Brandwein, Paul F., and others, **Science for Better Living**. Harcourt, Brace and Co., N. Y., 1952, pp. 144-149.  
**Everyday Science**, 1946, pp. 21-55.  
 Parker, Bertha Morris, **Our Ocean of Air**. Row, Peterson and Co., Evanston, Ill., 1941.  
 Lynde, Carleton John, **Science Experiences with Home Equipment**. International Textbook Co., Scranton, Pa., 1949.  
 Brandwein, Paul F., and others, **You and Your World**. Harcourt, Brace and Co., Chicago, 1953, pp. 238-256.  
 Filmstrips: **Air:**  
                   No. 1 General Science  
                   **Atmosphere:**  
                   No. 1 Foundations of Chemistry

36. (Cont'd)	<p>Have students prepare a chart on how various kinds of energy can be transformed.</p> <p>Have students demonstrate experiments on:</p> <ol style="list-style-type: none"><li>1. How does friction act?</li><li>2. How does inertia act?</li><li>3. How does centrifugal force act?</li><li>4. How is one form of energy changed into another?</li></ol>
37. Has some understanding of how living things are grouped.	<p>Take field trips to identify trees, shrubs, and herbaceous plants, and the family of each plant.</p> <p>Assign a group of plants or animals to each student and have each give an oral report on the characteristics of that group.</p> <p>Take a field trip to a park, zoo, or field museum where students study the characteristics of various plant and animal phyla.</p> <p>Have students make charts to show plant and animal phyla with representative plants and animals under each.</p> <p>Have student projects to identify a few new things in order to show the helpfulness in universal classification.</p> <p>Study keys of identification of plants and animals and note how relationships graduate from, or branch out tree-like.</p>
38. Becomes more familiar with the phenomena of atmospheric pressure and some of the applications using air pressure.	<p>Perform simple experiments to show that air has weight and, because of its weight, can exert pressure. Teach that air pressure decreases as we go into the upper air.</p> <p>Experiment:   <b>Air Pressure</b></p> <p>Materials:   Wide-mouthed bottle with a smooth, flat rim and a sheet of writing paper.</p> <p>Procedure:   Fill the bottle with cold water. Moisten the rim of the bottle. Place the paper firmly against the rim. Hold the paper in place with the palm of one hand while you turn the bottle</p>



## SUGGESTED REFERENCES

39. United States Civil Defense, **Basic Course for Civil Defense**. U. S. Government Printing Office, Washington 25, D. C., 1955.  
Meyer, Jerome S., **Picture Book of Molecules and Atoms**. Lothrop, Lee and Co., Inc., N. Y., 1947, pp. 45-47.  
Lewellen, John, **Primer of Atomic Energy**. S. R. A., 1952.  
Gerstell, Richard, **How to Survive an Atomic Bomb**. Bantam Books, Inc., N. Y., 1950.  
**Adventures Inside the Atom**. Public Relations, Dept. 2-119, General Electric Co., Schenectady, N. Y.  
**You Can Survive**. U. S. Government Printing Office, Washington 25, D. C., 1950.  
**Design for Defense**. Utah State Dept. of Public Instruction, Salt Lake City, Utah, August 1952.  
Film: **The Atom** 16 mm 11 minutes  
Filmstrip: **Chemistry, Set II:**  
No. 1 **Structure of the Atom**
40. **Everyday Science**, 1946, pp. 62-63.  
**General Science Made Easy**, 1942, pp. 78-79.  
\***Science for Daily Use**, 1940, pp. 229-235.  
Filmstrips: **Foundations of Chemistry:**  
No. 8 **Oxygen and Hydrogen**  
No. 10 **Water**

---

\*Watkins, Ralph K., and Perry, Winifred, The Macmillan Co., N. Y.

38. (Cont'd)	<p>upside down. Remove your hand from the paper. The paper stays in place, and the water does not fall out.</p> <p>Conclusion: The air pushes against the paper and holds it in place. The air pressure exerts a greater force than the weight of the water in the bottle. If any air leaks in at some place around the bottle's rim, the experiment will fail.</p> <p>Use a soda straw and a glass of drinking water to demonstrate that you cannot drink water through a straw or tube unless you reduce the air pressure inside the tube by sucking some of the air out, so that the air pressure outside is greater than the pressure inside.</p> <p>Demonstrate the principle involved in the operation of a pressure cooker, pressure tank, hydraulic jack, air brake, etc.</p> <p>Consider the danger involved in handling such equipment as: pressure cooker, etc.</p>
39. Knows how to protect himself in case of an atomic explosion.	<p>Follow the advice and direction of the local Civil Defense authorities. Practice drills should be held often enough to acquaint the pupils with procedures and to make automatic responses to the warning signal.</p> <p>Bulletins of information can be obtained from Civil Defense headquarters and should be studied in the classroom prior to drills. Make the drills a serious occasion. Be as realistic as possible.</p>
40. Knows the composition of water.	<p>Have the class or some member of the class examine a glass of water and note whether it has color, odor, or taste. This examination should prove that water is colorless, odorless, and tasteless.</p> <p>Water is composed of two parts of hydrogen and one part of oxygen and is written H<sub>2</sub>O by the scientist. A simple way to get water from hydrogen and oxygen is to burn an ordinary wax candle under a covered glass or glass beaker. The candle is briefly a compound of hydrogen and carbon</p>

## SUGGESTED REFERENCES

41. **General Science Made Easy**, 1942, pp. 78-88.  
Parker, Bertha Morris, **Water Supply and Sewage Disposal**. Row, Peterson and Co., Evanston, Ill.  
**Science for Daily Life Use**, 1940, pp. 92-93.  
Dowling, Thomas I., and others, **Investigate Why**. The John Winston Co., Chicago, 1953, pp. 73-110.  
Film: **The New Frontier** 16 mm 20 minutes  
Filmstrip: **General Science:**  
No. 11 **Water**

42. \***Classroom Activities Relating to Natural Resources**, 1952.  
\*\***New Ideas in Science**, 1946, pp. 316-324.  
**Science for Daily Use**, 1940, pp. 396-403.  
Films: **Planning to Prosper** 16 mm 20 minutes  
**Permanent Farming** 16 mm 30 minutes  
Filmstrips: **Contour Furrows**  
**Control of Water Erosion**

---

\*Wight, Edgar, Bureau of Indian Affairs, Department of the Interior, Washington, D. C.

\*\*Craig, Gerald S., and Hyde, Margaret Oldroyd, Ginn and Co., Chicago.

40. (Cont'd)

and when it is burned, the hydrogen unites with the oxygen from the air and drops of water will collect on the glass.

Find out and discuss what makes water hard and how it can be softened. Stress the soap economy of softened water.
41. Can trace and understand the distribution of water throughout the world.

Students should gather information and get an understanding of the water cycle. Trace the water from the time it goes into the air through evaporation from lakes, rivers, and oceans; is condensed to form clouds; and returns as rain, snow, or hail to form ground and surface water.

Have students name some of the creeks, rivers, and lakes in the community or area.

Have students find out what happens to water when it returns to the earth. Water exerts pressure because of its weight and is constantly seeking its own level.

Use two jars or glasses half-filled with water and place on different levels. By means of a small hose, siphon water from one to the other. Notice that water will not pass from lower to higher levels but will readily seek its own level when siphoned from the jar to a lower level.

Have the class observe through visual aids and field trips, how water is distributed for human consumption and crop production in areas where there is little, if any, rainfall. Be sure they know how the water, either at home or school, reaches the place where it is needed. Explain or have the students report on how a pump is used to obtain water from the ground. Be sure that students know why the rainfall is abundant in some regions and limited in others.
42. Has some understanding of the principles of good soil management in his community.

Study and observe by a field trip or visual aid material, some of the common soil management practices. These should include terracing, crop rotation, strip cropping, contour plowing, stubble mulch farming, water spreading, and others. Find out how these practices prevent erosion and increase crop production.

## SUGGESTED REFERENCES

42. (Cont'd)

**Strip Cropping**  
**Wind Erosion**  
**Soil Conservation Set**

43. Schneider, Herman, **Everyday Machines and How They Work**. Whittlesey House, McGraw-Hill Book Co., N. Y., 1950.  
**Science for Daily Use**. 1940, pp. 277-310.  
**New Ideas in Science**. 1946, pp. 139-169.  
Filmstrip: **Aerodynamics:**  
No. 2. **The Complete Airplane**

44. Parker, Bertha Morris, **Electricity**. Row, Peterson and Co., Evanston, Ill., 1944.  
\***Discovering Our World**, Book III. 1947, pp. 122-132.

---

\*Beauchamp, Wilbur L., and others. Scott, Foresman and Co., Chicago, Ill.



42. (Cont'd)

Ask students to invite some qualified person to speak on land and its care in the area.

Plant seeds in good and poor soil and observe their growth.

Study land conditions on the local reservation or reservations and get suggestions as to how good soil management practices can be put into operation.

43. Understands the basic principles of complex machines.

Have each member of the class construct a model of some complex machine, such as a wheelbarrow, model airplane, windmill, and scooter. In all of these models, be sure the student understands how force is applied to an advantage. Man uses machines for three purposes.

1. To multiply his effort.
2. To obtain a greater speed or to cover a greater distance.
3. To change the direction of his effort.

Demonstrate by means of a small wagon or other vehicle how much easier a given load can be moved by the aid of wheels. Remove the wheels and notice the increased effort because of friction.

Observe how complex machinery in the classroom operates. Examples: pencil sharpener, clock, etc. Take a field trip and list the various complex machines in use. Notice how much each one helps make work easier and displaces man-power.

Students should remember these facts:

1. Machines do not create work.
2. Machines do not save work.
3. Machines do make it possible for a small effort to move a large object at the expense of distance.
4. Machines can be made to produce a speed or distance advantage at the expense of force.

44. Understands how electricity is generated and transmitted.

Pupils should already have had the experience of generating and studying electricity. See Goals 8, 21, and 22. An understanding of how electricity is generated may be developed by again making and using the magnet. This develops the

SUGGESTED REFERENCES

44. (Cont'd)  
**General Science Made Easy**, 1942, pp. 200-212.  
Films: **Elementary Electricity** 16 mm 10 minutes  
**Water Power** 16 mm 10 minutes  
Filmstrip: **Fundamentals of Electricity** Set 1-10.

45. **Discovering Our World**, Book III, pp. 130-135.  
**Everyday Living**, Goals 52, 53.  
**Everyday Science**, 1946, pp. 397-410.

46. **You and Science**. 1955, pp. 512-525.  
Parker, Bertha Morris, **Sound**. Row, Peterson and Co., Evanston, Ill., 1944.  
**New Ideas in Science**, 1946, pp. 258-280.  
Films: **Sound** 16 mm 10 minutes  
**Sound Waves and Their Sources** 16 mm 11 minutes  
Filmstrip: **General Science:**  
No. 10 **Sound**

44. (Cont'd)

concept that generators in power plants are also made of coils of wire and are big electric magnets. Visit the school and community power plants to observe generators in operation. Point out that the generators may be driven by wind, steam, gasoline, or water power. Use all types of visual aids possible.

Use dry cell batteries connected to an electric bell to demonstrate how electricity travels through the wires. Use charts, films, and blackboard sketches to show how electric current travels. Connect an electric plate or an electric heater and watch the wires get red. Make a toy electric motor run. Make the motor run some other toy. Connect two telegraph sets. Send messages.

Teach that electric waves can also be transmitted or radiated through space without wires; for example: radio broadcasting and receiving. This principle can be demonstrated by having two boys hold a ten or twelve-foot rope so that it is slack but does not touch the floor. The energy set up by one boy waving his hand is carried **in waves** through the rope to the other boy.
45. Appreciates the power of electricity and shows respect for the danger resulting from improper use.

Use good films and filmstrips to teach this goal.

Have an electrician or some other qualified person place an exposed "live" wire on a piece of combustible material. Pupils can observe the heat and recognize the danger from an electric current and an exposed hot wire.

Emphasize the danger of electric equipment and wires, and the danger of using electric switches or equipment during an electrical storm.
46. Understands what makes sound.

Pupils touch violin, piano or tuning fork to feel vibration. Put a cork on a drum and watch the cork move with the vibrations. Strike a tuning fork and hold it in water to see the waves caused by vibrations. Develop an understanding that sound waves travel in the air much like water when a stone is thrown into it, but sound waves travel too fast to be seen by the human eye.

Find pictures that explain the voice box. Discuss how the voice may be more pleasing. Use rubber bands and a small wooden box without a lid to show the class how the pitch of sounds can be changed.

SUGGESTED REFERENCES

47. **Everyday Science.** 1946, pp. 566-587.  
\***Wonderworld of Science,** Book VIII. 1948.  
**General Science Made Easy,** 1942.  
Films: **Sound** 16 mm 10 minutes  
**On the Air** 16 mm 10 minutes

48. **General Science Made Easy,** 1942, pp. 256-267.  
Baker, Arthur O., and others, **Dynamic Biology Today.** Rand McNally  
and Co., Chicago, 1943, pp. 404-444.

---

\*Meister, Morris, and others. Charles Scribner's Sons, Chicago.

47. Understands how sound travels.

Sound is caused by vibrations, and there must be something to carry the sound to the ear. Sound cannot travel through empty space. Unlike light it can travel around corners. If a person around the corner is talking, he can be heard but not seen.

Hang an alarm clock from the top of an empty bell jar. Remove the air from the bell jar. Notice that as the air is removed, the alarm can no longer be heard.

Demonstrate sound vibration by the use of various musical instruments. Notice how sound is controlled.

Study and get some understanding of "canned" sounds. Use tape recorder or record player to demonstrate.

Get some understanding of how the radio, telegraph, telephone, doorbell, wireless, and other sound-communication systems operate. Have the class observe the operation of these instruments.

48. Finds out how plants and animals are affected by seasonal changes.

Make a comparison of the seasonal changes in the area with that of other areas. Look at the weather temperature report in the local newspaper and notice the great variation.

Have students extend their information of the principles which bring about seasonal changes. Be sure students know that seasonal changes are **not due** to weather but to the earth's position as it revolves around the sun.

Secure a plot of ground and plant seeds, such as wheat and cotton. Investigate and discuss why certain plants grow better in some areas than in others. Be sure they understand what short and long growing seasons mean and how they determine what can be grown in a certain area.

Find out how plants may be protected against seasonal changes. Observe what happens when plants go unprotected on a frosty night. Explain how smudge pots are used in some areas to protect plants against the weather. Use a "hot cap" to demonstrate its value in protecting plants in the early spring.

Ask members of the class to discuss how animals prepare for the seasonal changes. Observe how





48. (Cont'd)

man protects animals against seasonal changes. Notice how animals protect themselves against seasonal changes (long hair growth). Have children find out how plants and animals, through selection and breeding, can now be grown successfully in larger areas.
49. Recognizes sand, clay, and loam soils.

Secure authentic samples of clay, loam, and sandy soils. Ask members of the class to bring in soil samples from their homes or the area around the school. Notice that all soils are combinations of clay, loam and sandy soils.

Find the composition of heavy and light soils. By means of a lamp chimney have students experiment with the various types of soil. Test which soil is the most porous and how much water it will hold. To perform this experiment, have students cover the bottom of the lamp chimney with cloth and fill to within a few inches of the top with several types of soil. Be sure that an equal amount of soil is put in each chimney. Pour equal amounts of water in each chimney and time how long it takes to permeate each type of soil. Weigh the water at the beginning and after it has passed through the soil. The results will easily demonstrate the water-holding capacity of light and heavy soils.
50. Knows how to improve soil to increase production.

Class visits school farm or privately owned farm to find out how the soil is kept productive. Examine and learn about common types of organic and inorganic fertilizers.

Find and list common types of fertilizers.

Invite local farm agent or soil-and-moisture expert to talk to class on soil improvement and conservation.

See and study motion pictures, filmstrips, and charts on this subject. These can be obtained from the Department of Agriculture.
51. Understands how heat is transferred.

Develop the concept of heat transmission by conduction, convection, and radiation.

a. To demonstrate the principle of conduction, heat the end of an iron rod and notice how the

## SUGGESTED REFERENCES

52. **Discovering Our World**, Book III, 1947.  
Parker, Bertha Morris, **Light**. Row, Peterson and Co., Evanston, Ill., 1949.  
**General Science Made Easy**, 1942, p. 173.  
Film: **Television** 16 mm 10 minutes

51. (Cont'd)

heat travels along the length of the rod either by touch (carefully, so student does not burn hand) or by placing thermometers at various points on the rod. Call upon the class for other examples of heat by conduction.

- b. Convection is the transfer of heat from hotter to colder bodies by means of moving liquid or gas. Take the temperature of the room at the floor level and at the ceiling level. Unequally heated masses of air form a convection current.
- c. Learns that the heat from the sun reaches the earth through radiation. Have student experience how heat from the sun warms the body. Notice how the temperature changes when students move to a shady area.

52. Understands how light travels.

Learn that light is transmitted by waves, similar to water waves, or by particles similar to a moving arrow or bullet.

Find out that light can pass through some materials so well that one can see clearly through those materials. These materials are transparent; good examples are glass; clear, still water; and air.

Find out that when materials allow some light to pass through, they are translucent. Examples: frosted glass and oiled paper.

Find out that materials which do not permit any light transmission are opaques. Examples: wood, rock, steel, and cardboard.

Develop some understanding of how a camera, movie projector, magnifying glass, television, and a microscope operate in relation to light. Demonstrate the use of these machines wherever possible.

Have a member of the class hold a prism in the sunlight and notice the band of rainbow colors. (If enough prisms are available, the entire class can participate.) Sunlight is composed of the following colors: violet, blue, green, yellow, orange, and red. Sometimes indigo is included. Make a color wheel; turn it rapidly. Notice that when it spins rapidly enough, a white color shows.

## SUGGESTED REFERENCES

53. Carroll, Franklin, **Understanding the Universe.** John C. Winston Co., Chicago, 1952, pp. 295-302.  
Lewellen, John, **Primer of Atomic Energy.** S. R. A., Inc., 1952.  
United States Civil Defense, **Basic Course for Civil Defense.** U. S. Government Printing Office, Washington 25, D. C., 1955.  
Film: **The Atom** 16 mm 10 minutes  
Filmstrip: **Chemistry Set II:**  
1. **Structure of the Atom**

54. **Science for Modern Living,** 1951, pp. 588-606.  
**You and Science,** 1955, pp. 371-384.



53. Has some understanding of atomic energy.

Have pupils gather information from newspapers and other sources on atomic energy. Discuss how atomic power can be used to help as well as destroy man.

Invite the local Civilian Defense Officer to explain the program and tell how one can be protected against atomic blasts. Secure printed material from this agency and put into practice its many suggestions.

Have pupils participate in an atomic raid drill.
54. Knows how science has made more food available.

The student may take some food product in the community and learn how science has improved its quantity, quality, production, and distribution. He may consult many specialists in the field, take trips, and study about the men who have made valuable contributions in these fields.



GOALS

LEVELS SEVEN, EIGHT, AND NINE

HEALTH

## SUGGESTED REFERENCES

1.   \***For Healthful Living**, 1950, p. 19.  
      \*\***Everyday Living**, Goal 22.  
      \*\*\***Adventures in Living**, 1954, pp. 21-61.
  
2.   Jones, Edwina, and others, **Good Health for Better Living**. Laidlaw Bros., 2121 Staunton Court, Palo Alto, Calif., 1951, pp. 291-297.  
      Brownell, Clifford and others, **Living and Doing**. American Book Co., N. Y., pp. 291-297.  
   \*\*\*\***You're Growing Up**, Chicago, 1950, pp. 291-297.  
      Film: **Defense Against Invasion**   16 mm   12 minutes
  
3.   \*\*\*\*\***You and Your Health**, 1953, pp. 136-142.  
      **You're Growing Up**, 1950, p. 183.  
      **Everyday Living**, Goals 8, 9.  
      Films: **Trail to Health**                   16 mm   20 minutes  
              **Tuberculosis**                   16 mm   11 minutes  
      Filmstrips: **T. B. Facts**  
                      **T. B. What It Is and What To Do About It**  
      Note: See **Sample Unit**, Supplement D.
  
4.   **You're Growing Up**, 1950, pp. 172-173; 177-183; 216-217.  
      Films: **Trail to Health**                   16 mm   20 minutes  
              **Tuberculosis**                   16 mm   11 minutes  
              **This Is T. B.**                   16 mm   10 minutes
  
5.   **Adventures in Living**, 1954, pp. 125-133.  
      **You're Growing Up**, 1950, pp. 36-37; 47; 66; 198; 207; 208; 211.  
      **For Healthful Living**, 1950, p. 15.  
      **Everyday Living**, Goal 2.

---

\* Jones, Edwina, Laidlaw Bros., 2121 Staunton Court, Palo Alto, Calif.

\*\* Bureau of Indian Affairs, Dept. of the Interior, Washington, D. C.

\*\*\* O'Keefe, Patric Ruth, and Maxwell, Cyrus H., John C. Winston, Chicago.

\*\*\*\* Shacter, Helen, and others, Scott, Foresman and Co., Chicago.

\*\*\*\*\* Burkhard, William E., and others, Lyons & Carnahan, Chicago.

- |  |  |
|--|--|
| 1. Understands the relationship of health to athletic and other recreational activities. | Ask coach, nurse, or public health consultant to talk on this subject. Use charts and articles from papers and magazines about importance of good health to success in physical development.   |
| 2. Knows what immunizations he gets regularly and why they are given.                    | Have group visit the health authorities or hospital staff to obtain this information. Have student keep his own record and take part in class discussion.  |
| 3. Knows the relationship of rest and good food in the cure of tuberculosis.             | Use visual aids, such as film strips, charts, X-ray, and motion pictures.  |
| 4. Understands that early stages of tuberculosis can be cured.                           | <p>Continue to stress the importance of the X-ray to discover early tuberculosis (Goal 26-a, Level Six). Some understanding of how X-rays are made may prove helpful in creating interest in having a yearly X-ray.</p> <p>Pupil should be taken more into confidence of doctor or nurse who conducts the examination.</p> <p>Point out that we have regular check-ups on automobiles to find and eliminate defects before they become serious. We should be even more concerned about the human body and have regular physical check-ups.</p> |
| 5. Understands the need for a yearly physical examination.                               | Pupil should learn that it is economically sound to have regular examinations instead of waiting until ill to consult a doctor.  |



## SUGGESTED REFERENCES

6. \*Kirkendall, Lester A., **Helping Children Understand Sex** (a pamphlet). S. R. A., Chicago, 1952.  
Kirkendall, Lester A., **Understanding Sex** (a pamphlet). S. R. A. Chicago, 1950.  
**You're Growing Up**, 1950, pp. 6-48.  
Neugarten, Bernice L., **How You Grow** (a pamphlet).  
**Adventures in Living**, 1954, pp. 10-20.
7. **You're Growing Up**, 1950, pp. 187-188; 217.  
**Everyday Living**, Goals 2, 4.  
Meredith, Florence L., and others, **Health and Fitness**. D. C. Health and Co., Boston, Mass., 1953, pp. 219-226.  
Film: **The Teeth** 16 mm 10 minutes  
Filmstrips: **Dental Health:**  
1. **Your Teeth and Your Health**  
2. **Dental Health for Young Americans**
8. **You're Growing Up**, 1950, pp. 187-188; 217.  
**Everyday Living**, Goal 2.  
**You and Your Health**, 1953, pp. 224-231.  
Film: **The Enemy of Your Eyes** (trachoma) 16 mm 12 minutes  
Filmstrips: **The Eyes and Their Care**  
**Human Body. Series I**
9. **Everyday Living**, Goals 19, 56.  
Clemensen, Jessie Williams, and LaPorte, William Ralph, **Your Health and Safety**. Harcourt, Brace and Co., Inc., 1952, pp. 310-313.
10. **You're Growing Up**, 1951.  
**Everyday Living**, Goals 19, 56.
11. **Everyday Living**, Goals 29, 48.  
**Your Health and Safety**, 1952, p. 337.

---

\*Science Research Associates, 57 W. Grand Avenue, Chicago.

6. Understands the physical changes of puberty.	<p>The doctor or nurse should help the teacher initiate this subject and make recommendations and provide subject matter. Visual aids approved by local authorities will prove helpful. Use charts and life-size models. Show films such as <b>Life and Growth</b>, after first obtaining approval and cooperation of parents and community leaders.</p>
7. Visits a dentist twice a year.	<p>Stress the importance of good oral hygiene. Pupil should have acquired the habit of brushing his teeth at least once a day.</p> <p>Have students study the structure of the tooth and how decay begins. Use charts and films.</p>
8. Has a regular eye check.	<p>Use Snellen or some similar test for acuity of vision in the classroom. In cases where there are signs of eye strain or defects, health officials should be consulted.</p>
9. Understands that all experiences are not pleasurable.	<p>Point out that we can learn from each new experience. Many day-by-day experiences are not pleasurable but must be met and dealt with to the best of our ability.</p>
10. Knows that running away does not solve his problems.	<p>Help the child to face reality by providing individual counselling and guidance service. Let him talk over his problem and help him find a solution. Select stories that are appropriate for him to read and discuss with others. Set up a problem he can solve successfully.</p>
11. Knows how to use a public restroom.	<p>Arrange for pupils to visit a public restroom, see the facilities, and learn how to use them properly. Service station attendants may be helpful in assisting with this study.</p> <p>If a public restroom is not available, use local toilet facilities.</p>

SUGGESTED REFERENCES

12. **Red Cross First Aid Text-Book**  
Films: **First Aid** 16 mm 11 minutes  
**Help Wanted** 16 mm 34 minutes
13. **Your Health and Safety.** Harcourt, Brace and Co., Chicago, Ill., 1952, pp, 490-491.

12. Knows what should go into a first aid kit.

Students should become acquainted with the first aid kit equipment. A first aid kit should be opened and shown to the class with an explanation of how each item should be used. The kit should contain the following items:

Band-aids, 3-inch sterile gauze squares, assorted sterile bandage compresses, sterile absorbent cotton, triangular bandages, 36-inch sterile squares, a tube of good burn ointment, mild iodine, inelastic tourniquet, scissors and forceps, 1- and 2-inch roller bandages, roll of 1½ inch adhesive tape, paper cups, wire or thin board splints, sterile castor oil or mineral oil for use in the eyes, aromatic spirits of ammonia, and a bottle of Merthiolate.

13. Knows what to do for minor cuts and burns.

Students should know that the important thing in minor cuts is to avoid possible infection. A class demonstration should be given on how to wash wounds and apply antiseptics. Sterile gauze and cleanliness should be emphasized. Student should realize that puncture wounds caused by rusty nails, splinters, and other sharp objects are particularly dangerous and contain germs. Students should learn three kinds of burns: first, second, and third degree burns and what to do for them.

## SUGGESTED REFERENCES

14. \***Into Your Teens**, 1951, pp. 17-23; 61-65.  
**Everyday Living**, Goals 18-19.  
 Jenkins, Gladys Gardner, and others, **Teen-agers**, Scott, Foresman and Co., Chicago, 1954, pp. 64-99.
  
15. **Into Your Teens**, 1951, pp. 210-222.  
**Everyday Living**, Goal 1.  
 Meredith, Florence L., and others, **Health and Fitness**. D. C. Heath and Co., Boston, Mass., 1953, pp. 255-264.
  
16. \*\***Red Cross Home Nursing**, School Edition, 1948, pp. 261-276.  
 Jones, Edwina, **Good Health for Better Living**. Laidlaw Bros., 2121 Staunton Court, Palo Alto, Calif., 1951, pp. 157-170.  
 \*\*\***Your Health and Safety**, 1952, pp. 373-380.
  
17. Burkhard, William E., and others, **Good Health for All**. Lyons and Carnahan, Chicago, 1953, pp. 77-81.  
**Your Health and Safety**, 1952, pp. 493-494.  
 Films: **The Winged Scourge** 16 mm 10 minutes  
           **The Mosquito** 16 mm 10 minutes
  
18. **Into Your Teens**, 1951, pp. 105-108; 226-229.  
**Everyday Living**, Goal 7.  
 Films: **How To Be Well Groomed** 16 mm 10 minutes  
           **Human Body** 16 mm 10 minutes  
           **Joan Avoids a Cold** 16 mm 10 minutes  
 Filmstrips: **Human Body, Series I:**  
               3. **Digestion of Food**  
               4. **Care of the Feet**  
               5. **Foods and Nutrition**  
               **Good Health:**  
               1. **You and Your Clothes**
  
19. **Red Cross Home Nursing**, School Edition, 1948.  
 National Tuberculosis Association, **What You Need to Know About T. B.** (Leaflet). National Tuberculosis Association, 790 Broadway, N. Y. 19, 1948.  
**You're Growing Up**, 1950, pp. 174-183.  
 Films: **Trail to Health** 16 mm 20 minutes  
           **Tuberculosis** 16 mm 11 minutes
  
20. **Everyday Living**, Goal 2.

---

\*Shacter, Helen, and others. Scott, Foresman and Co., Chicago.

\*\*Trott, Lona L., The Blakiston Co., Philadelphia, Pa.

\*\*\*Clemensen, Jessie Williams, and La Porte, William Ralph, Harcourt, Brace and Co., N. Y.



- |   |  |
|---|--|
| 14. Recognizes that personal growth can be achieved through learning from his own mistakes. | Pupils should begin to analyze and talk about their own mistakes in terms of self-improvement. Students should learn to accept and profit from constructive criticism.   |
| 15. Understands the relationship of health to happiness.                                    | It should be made clear to pupils that mental unrest as well as physical disturbance affect them and are closely related.  |
| 16. Knows the symptoms of the most prevalent diseases.                                      | Invite the school doctor or nurse to visit the class and talk to the group. Show health films. Use reference material to find information. Make charts and posters.  |
| 17. Knows what to do for poisonous bites.   | Have students learn the most common venomous animals, such as insects, black widow spider, scorpions, Gila monster, poisonous snakes, mites, and ticks. Use visual aids, such as pictures, films, and filmstrips to show these animals and their effect on our health. |
| 18. Knows the relationship of rest, good food, and proper clothing to health.               | Prior to this level, the pupil has practiced simple health rules. At this level, he needs to realize the importance of rest, good food, and proper clothing in keeping healthy. Use charts and other visual aids.  |
| 19. Knows the precautions necessary in preventing tuberculosis.                             | Ask medical personnel to exhibit X-ray films and point out cases of tuberculosis in various stages.<br><br>Discuss the dangers of contacts with tubercular cases. Demonstrate the procedure in carrying out precautionary measures.                                    |
| 20. Has some understanding of the information on his health record.                         | Ask a nurse or physician to go over the health record form carefully with the class. Discuss reasons for items which are included on the form.   |

## SUGGESTED REFERENCES

21. \***A Sound Body**, 1947, pp. 127-238.  
**Into Your Teens**, 1951, pp. 235-236.  
**Everyday Living**.  
Film: **Eyes for Tomorrow** 16 mm 20 minutes
22. **Into Your Teens**, 1951, pp. 242-244.  
**Everyday Living**.  
Film: **Your Teeth** 16 mm 10 minutes  
Filmstrip: **Human Body, Series I:**  
2. **The Teeth**
23. **Into Your Teens**, 1951, pp. 20-23; 80-86; 93-95; 140-147.  
**Everyday Living**.  
O'Keefe, Patric Ruth, and others, **Wider Horizons**. John C. Winston Co., 1954, p. 201.
24. **Into Your Teens**, 1951, pp. 20-23; 80-86; 93-95.  
Landis, Judson T., and Landis, Mary G., **Building Your Life**. Prentice-Hall, Inc., N. Y., 1954, pp. 74-84.  
Films: **Control Your Emotions** 16 mm 13½ minutes  
**Understand Your Emotions** 16 mm 13½ minutes
25. **A Sound Body**, 1947, pp. 23-44.  
**Into Your Teens**, 1951, pp. 10-12.  
**For Healthful Living**, 1954, pp. 90-115.

---

\*Charters, W. W., and others. The Macmillan Co., N. Y.

21. Follows instructions for the proper care of his eyes.

Discuss the necessity for periodic testing of vision.

Investigate the relationship of vision to accidents.

Discuss proper care of the eyes, prevention of eye fatigue, and use of prescribed glasses.

22. Realizes the value of regular dental examinations.

Discuss what the dentist is looking for during his check-up. Discuss the purpose of dental X-rays.

Ask dentist to exhibit and explain dental X-ray.

23. Understands the emotional changes brought about by physical changes at puberty.

It will be desirable to keep the parents informed and obtain their consent before showing any movies on this subject, especially with mixed groups of boys and girls. Close cooperation with the doctor and the nurse is advisable.

24. Shows growth in ability to control his emotions in many situations.

Help the pupil to analyze his own behavior in many situations with a view toward self-control and improvement.

At this level pupils should understand the interdependence of the parts of the body. They must understand that good health is dependent on proper functioning of all parts of the human body. Use diagrams drawn on the blackboard.

25. Knows the parts of the digestive system.

Use visual aids, such as film strips, motion pictures, and torso models. Visit slaughter houses on the farm where butchering of animals takes place and see the various organs and bones of an animal's body. Use a microscope to study cellular structure and circulation of blood in the skin. (Use skin of live frog.)

## SUGGESTED REFERENCES

26. **A Sound Body**, 1947. pp. 93-102; 117-119.  
**Into Your Teens**, 1951, pp. 10-11; 215-229.  
Film: **Mechanisms of Breathing** 16 mm 10 minutes
27. **Your Health and Safety**. Harcourt, Brace and Co., Chicago, 1952, pp. 491-493.  
Meredith, Florence L., and others, **Health and Fitness**. D. C. Heath and Co., Boston, 1953, pp. 30-31.  
Jones, Edwina, and others, **For Healthful Living**. Laidlaw Bros., 2121 Staunton Court, Palo Alto, Calif., 1954, pp. 208-210.  
Filmstrip: **First Aid:**  
3. **Use of Artificial Respiration**

26. Understands the respiratory system and how to care for it.

Same as Goal 25.

Also consider fresh air and sunshine.

27. Knows how to administer artificial respiration.

Students should know that suspended breathing may be the result of drowning or electric shock. A class demonstration should be given, showing the method used in artificial respiration. Films and filmstrips can be shown in conjunction with the demonstration.

The following points should be covered in the demonstration:

1. The victim first must be resuscitated. (Often the heart is still beating for some minutes after breathing stops. These minutes must be used to attempt to start breathing.)
2. Artificial respiration must begin at once and be continued until the individual is breathing of his own accord or a physician declares the heart has ceased to beat.
3. Artificial respiration is also needed for certain types of poisoning, especially for gas poisoning.



## SUGGESTED REFERENCES

28. Shacter, Helen, and others, **Into Your Teens**. Scott, Foresman and Co., Chicago, 1951, pp. 10-11; 215-219; 220-221.  
Film: **Heart and Circulation** 16 mm 11 minutes  
Filmstrip: **Human Body, Series I:**  
1. **First Aid for Bleeding and Shock**
29. \***Good Health for All**, 1953, p. 231.  
Jones, Edwina, and others, **Good Health for Better Living**. Laidlaw Bros., 2121 Staunton Court, Palo Alto, Calif., 1951, pp. 246-249.  
Filmstrip: **First Aid:**  
1. **First Aid for Bleeding and Shock**
30. Charters, W. W., and others, **A Sound Body**. The Macmillan Co., N. Y., 1947, pp. 287-300.  
**Everyday Living.**  
**Good Health for All**, 1953, pp. 291-307.
31. National Tuberculosis Association, **What You Need to Know About T. B.** (leaflet). National Tuberculosis Association, 1790 Broadway, N. Y. 19.  
National Tuberculosis Association, **Your Chest X-Ray Project** (leaflet).  
Films: **The Indian Sanitarian Will Help You** 16 mm 10 minutes  
**Defense Against Invasion** 16 mm 10 minutes

---

\*Burkhard, William E., and others, Lyons & Carnahan, Chicago.

GOAL	LEVEL NINE	SUGGESTED ACTIVITIES AND TECHNIQUES
28. Understands something of the circulatory system and its functions.		<p>Student should know major organs of the system and the major function of each organ. Study charts, make diagrams, and use visual aids.</p> <p>Stress the interdependence of the digestive system on the circulatory system.</p>
29. Knows what to do for bleeding.		<p>Students should learn the difference between arterial and veinal bleeding. Bleeding from arteries is in spurts, and veinal is a steady flow.</p> <p>Students should practice on each other, using pressure upon the wound. Students are shown certain pressure spots where pressure may be applied to control bleeding from arteries. They are also shown how to apply a tourniquet, or band, to a limb if such should be necessary.</p> <p>Students should learn not to leave a tourniquet on a limb too long, since this may cause the tissues beyond it to die. Students should learn what to do in case of a nose bleed. Firm pressure against the upper lip just under the nose will usually serve as a check.</p>
30. Understands something about the nervous system and how to care for it.		<p>Show the relationship of the nervous system to our environment. Stress the use of the nervous system as a means of communication within the body. Stress the need of rest, relaxation, and control of emotions in connection with the proper function of nerves. Discuss undesirable problems which may stem from improper rest and sleep. Show the connection between mental problems and a weak nervous system.</p>
31. Participates in the health programs, such as immunization, infantile paralysis, tuberculosis, etc.		<p>It is essential for the pupil to know the purpose of such programs and how he can help. If funds are collected, he should know how and where the money is spent. He can participate by being immunized or having an X-ray. He can participate in other types of health programs, such as the Cancer Fund and the Red Cross drives.</p>

SUGGESTED REFERENCES

32. Rokahr, Mary (ed.), **Poster in Housework** (pamphlet). AIS No. 83  
U. S. Department of Agriculture, Washington, D. C.  
**Everyday Living.**  
\***You and Your Health**, 1953, pp. 178-189.  
O'Keefe, Pattric Ruth, and Maxwell, Cyrus H., **Adventures in Living**.  
John C. Winston Co., Chicago, 1954, pp. 91-94; 127-128.

33. Shacter, Helen, and others, **You're Growing Up**. Scott, Foresman and  
Co., Chicago, 1950, pp. 214-215.  
**You and Your Health**. Lyons and Carnahan, Chicago, 1953, pp. 266-  
277.  
Filmstrips: **Alcohol and Narcotics:**  
**3 and 4**

34. \*\***Understanding Health**, 1950, pp. 442-447.  
National Tuberculosis Association, **What You Need to Know About**  
**T. B.** (leaflet). National Tuberculosis Association, 1790 Broadway,  
N. Y. 19.  
\*\*\***Red Cross Home Nursing**, School Edition, 1948, pp. 51-53; 177.  
National Tuberculosis Association, **Your Chest X-Ray Project** (leaflet).  
**Everyday Living**, Goals 2, 8.  
Films: **Let My People Live** 16 mm 14 minutes  
**The Inside Story (T. B.)** 16 mm 14 minutes

35. **Understanding Health**, 1950.  
**Everyday Living**, Goal 2.  
**Red Cross Home Nursing**, School Edition, 1948.

36. **Understanding Health**, 1950, pp. 67-75.  
**Everyday Living**, Goals 2, 4.  
Film: **About Faces** 16 mm 10 minutes

37. **Understanding Health**, 1950, pp. 162-181.  
\*\*\*\***Teen-Agers**, 1954, pp. 161-165.  
Films: **Your Eyes** 16 mm 11 minutes  
**How the Eye Functions** 16 mm 11 minutes

---

\*Burkhard, William E., and others, Lyons and Carnahan, Chicago.  
\*\*Goldberger, I. H., and Hallock, Grace T., Ginn and Co., Boston, Mass.  
\*\*\*Trott, Lona L., The Blakiston Co., Philadelphia, Pa.  
\*\*\*\*Jenkins, Gladys Gardner, and others. Scott, Foresman and Co., Chicago.

32. Understands that good health and good posture are closely related.

Discuss and demonstrate correct points of good posture. Have a posture check by a nurse or health instructor. Adjust desks to fit each student. Make good posture habitual. Have a school-wide walking and posture contest.

33. Knows why the use of narcotics should be avoided.

The dangers and effects of opium, morphine, heroin, cocaine, marijuana, and nicotine should be studied. The class may make an inventory of what they already know about the subject. Select committees to check the accuracy of this inventory with authoritative sources. View educational films on the subject. Prepare and give an assembly skit. Write letters for information. Make posters. Perform experiments with some of the lower forms of life.

34. Has some understanding of the methods of tuberculosis treatment.

Ask medical personnel to lead a discussion of the more common methods of treating tuberculosis.

35. Understands why the yearly physical examination contributes to community health.

Explain and discuss why the yearly physical examination is important not only to the individual but also to the community.

Discuss sanitary measures used in medical centers and reasons for these precautions.

36. Understands the benefits of good teeth.

Discuss the health and social advantages of good teeth. Collect and compare pictures of people with good teeth and poor teeth to show effect of teeth on appearance.

Consult school dentist for information and assistance in teaching this goal.

37. Has some understanding of the common defects of the eye.

Discuss the common visual defects which may be corrected with glasses. Compare the correction of vision with the focusing of a camera on a projector. Make wall charts showing eye defects.

## SUGGESTED REFERENCES

38. **Understanding Health**, 1950, pp. 222-233.  
\* **Building Your Life**, 1954, pp. 236-255.
39. **Understanding Health**, 1950, pp. 235-237.  
**Everyday Living**, Goals 18, 19.
40. **Understanding Health**, 1950, pp. 103-104; 222-238.  
**Everyday Living**, Goals 19, 56.  
**Building Your Life**, 1954, pp. 239-240.  
**Teen-Agers**, 1954, pp. 214; 227-231.
41. O'Keefe, Pattric Ruth, and others, **Wider Horizons**. John C. Winston Co., Chicago, 1954, pp. 114-127.  
Film: **Attitudes and Health** 16 mm 10 minutes
42. O'Keefe, Pattric Ruth, and Maxwell, Cyrus H., **Adventures in Living**. John C. Winston Co., Chicago, 1954, pp. 171-172.  
Film: **First Aid** 16 mm 11 minutes  
Filmstrips: **First Aid**:  
1. **Your Responsibility in First Aid**  
2. **Transportation of the Injured**
43. Rokahr, Mary (ed.), **Posture in Housework** (pamphlet). AIS No. 83  
U. S. Department of Agriculture, Washington, D. C.

---

\*Landis, Judson T., and Landis, Mary G., Prentice-Hall, Inc., N. Y.



- |  |  |
|--|--|
| 38. Assumes some responsibility for working out his own problems.  | The student should have begun to find himself by now. He should have a fairly logical approach to his problems, deciding what are his alternatives and trying to choose the best one. The teacher may help with a group project in working out approaches to teenage problems in general.  |
| 39. Acts as a counsellor to others who need help.  | The student may serve as a counsellor in the classroom or dormitory. Often the teacher or advisor enlists the help of a student, talking the problem over with him and helping him to plan an approach.  |
| 40. Talks freely about his personal problems with his teachers or advisors.  | The student should feel that his teacher or advisor is his friend. If he talks freely, his problems become less serious. He should establish this as one of the techniques that he will use in solving problems. The older person must strive to develop a rapport between himself and the student.  |
| 41. Knows that undesirable thoughts such as hate, anger, revenge, worry, and fear may cause pain, nervousness, loss of weight, and digestive disturbances. | The student may study the effects of the gland secretions and his emotional stability. He should learn to avoid strenuous exercise or emotional upsets before a meal and during a meal. He should watch his weight chart and try to find the causes for his loss of weight. He can learn to put his worries out of his mind, at least temporarily, by keeping busy with his hobby, work, or active play. |
| 42. Knows how to care for a person who is unconscious.   | Students should understand that there are many causes of unconsciousness, such as injuries to the brain, severe bleeding, sunstroke, poisoning, asphyxiation, sickness, apoplexy, diabetes, epilepsy, heart failure, shock, and drunkenness. Students should learn to keep the victim's head low if his face is pale, and slightly raised if his face is flushed.  |
| 43. Strives to practice good posture in sitting, walking, and standing.  | Have student select proper chair and desk. Have him practice walking with a book on his head. Show films on good posture. Have the class work out a check list for good posture. Each student  |

## SUGGESTED REFERENCES

43. (Cont'd)

**Everyday Living**, Goals 1, 2.

Films: **Posture and Exercise**  
**Posture Habits**

16 mm

10 minutes

16 mm

10 minutes

44. Bauer, W. W., and Dukelow, Donald, **What You Should Know About Smoking and Drinking**. Junior Life Adjustment Booklet, S.R.A., 1955. McCarthy, Raymond G., **Facts About Alcohol**. Life Adjustment Booklet, 1951.

**Understanding Health**, 1950.

**Everyday Living**, Goal 56.

**Building Your Life**, 1954, pp. 256-271.

Film: **Alcohol and the Human Body**

16 mm

10 minutes

Filmstrip: **Alcohol and Narcotics:**  
**1 and 2**

43. (Cont'd)

may evaluate posture of each member of the class, using this check list with or without the names of those evaluated being revealed. The study of this evaluation should do a great deal to make the class posture-conscious.

44. Knows how to cope with the problem of alcohol and other habit-forming drugs.

An intensive study is suggested. Appoint committees to use available references and other sources of information to obtain factual material for reports on the effects of alcohol and narcotics on the following social and economic problems:

1. Unhappy family life, improper guidance of children, inadequate or poor vocational guidance, broken homes, poverty.
2. Automobile accidents, industrial accidents.
3. Delinquency and crime.
4. Economic loss through inefficient workmanship, lower output of work, underdeveloped and unused talents and skills, destruction of property.
5. The history and methods of the work of Alcoholics Anonymous (Box 459, Grand Central Annex, New York 17, N. Y.).

View and discuss educational films on the subject.



## **GOALS**

### **LEVELS SEVEN, EIGHT, AND NINE**

## **VOCATIONS**

It should be understood that these Minimum Essential Goals are to be used for both boys and girls. Specific goals which apply to only boys or girls are vocational goals and are listed in the curriculum of a specific vocational department.



## SUGGESTED REFERENCES

1. \***Into Your Teens**, 1951, pp. 228-229.  
Harris, Florence L., and Kauffman, Treva E., **Young Folks at Home**.  
D. C. Heath and Co., Boston, 1953, pp. 64-65.  
Jupo, Frank, **Nothing to Eat but Food**. Aladdin Books, N. Y., 1954  
Films: **What makes Us Grow?** 16 mm 9 minutes  
**Your Food** 16 mm 13 minutes
  
2. **Everyday Living**, Goal 9.
  
  
  
  
  
  
  
  
  
  
3. \*\***Sharing Family Living**, 1951, pp. 193-196.  
Greer, Carlotta C., **Your Home and You**. Allyn and Bacon, Chicago,  
1948, pp. 310-316.  
Film: **Good Table Manners** 16 mm 10 minutes  
Filmstrips: **Manners Make a Difference:**  
1. **Why Have Good Manners?**  
3. **Table Manners**
  
  
  
  
  
  
  
  
  
  
4. **Everyday Living**, 1950, pp. 143-146.  
\*\*\*Baxter, Laura, and others, **Our Home and Family**. J. B. Lippincott  
Co., Chicago, 1952, pp. 39-43.
  
  
  
  
  
  
  
  
  
  
5. Hark, Mildred, **Make Your Pennies Count**, S.R.A., 1952.  
Lasser, J. K., and Porter, Sylvia F., **Money and You**, S.R.A., 1949.

---

\*Shacter, Helen, and others, Scott, Foresman and Co., Chicago.  
\*\*Baxter, Laura, and others, J. B. Lippincott Co., Chicago.  
\*\*\*Harris, Jessie W., and others, Houghton Mifflin, Chicago.

1. Learns to eat a variety of foods.

Learns the names of the different or new foods served in the dining room. Eat these foods over and over to learn to like them. Learn that we need a variety of foods to keep healthy. The Basic Seven food chart is used to help select the proper foods. Use food models and pictures to arrange foods in their proper Basic Seven groups and to learn the names of new foods.
2. Learns dining room service.

The teacher or advisor goes with the children to the dining room very early in the year to demonstrate the food service in that particular school dining room. She explains why this form of service is used and why it is important for each child to follow it.
3. Continues to practice correct table manners in the dining room.

Study pictures illustrating table manners. Discuss them in class. Practice the handling of knife and fork in the classroom, with actual food or without. Learn how to sit at the table, etc. Review table manners occasionally in the classroom and have someone report on dining room behavior.
4. Helps with personal buying.

Have student list items he will probably buy for himself; bring in pictures advertising each. Compare characteristics claimed. Teachers should bring articles to class to demonstrate points. Group plans shopping trip to town to purchase some needed article. After trip, make a report.
5. Keeps simple personal record of money spent.

Have group list steps necessary in keeping record of money spent: list essential items which a seventh grade pupil should consider in spending his money; make a bulletin board display of essential items of expenditure; list things they would like to have for themselves; write a story of a person who learned to save a little money each week and by Christmas time was able to give pleasure to his family by giving them remembrances.

What can one do without, each week, to save a little money? Discussion by group.

Have each student in the group keep a record of the money he spends for one month. Write a report on this project, telling what he learned from the activity.

## SUGGESTED REFERENCES

6. Stratton, Dorothy C., and Schelman, Helen B., **Your Best Foot Forward**. McGraw-Hill Book Co., Inc., N. Y., 1940, p. 109.  
\* **Homemaking for Teen-Agers**, 1951, pp. 407; 446-447.  
**Everyday Living**, Goal 48.  
**Everyday Living**, 1950, pp. 308-310.  
Film: **Social Courtesy** 16 mm 10 minutes
7. Carpenter, Dale, and others, **The World of Numbers**. Grade 5. The Macmillan Co., N. Y., 1950, pp. 4-5.  
Wheat, Harry Grove, and others, **Row-Peterson Arithmetic, Book 5**. Row, Peterson and Co., Evanston, Ill., 1952, pp. 48-49.  
**Everyday Living**, Goal 55.
8. **Into Your Teens**, 1951, pp. 273-295.  
**Sharing Family Living**, 1951, pp. 361-365.  
\*\* **Your Safety Handbook**. S. R. A., 1952.  
**Everyday Living**, 1950, pp. 131-139.  
Shea, John Gerald, and Paul Nolt Wenger, **Woodworking for Everybody**. Scranton-Laurel Publisher, distributed by Grosset and Dunlap, N. Y., 1953, pp. 124-130.  
**Everyday Living**, Goals 50, 51.  
Film: **Cooking:**  
**Kitchen Safety** 16 mm 11 minutes

---

\*McDermott, Irene E., and Nicholas, Florence W., Charles A. Bennett Co., Inc., Peoria, Ill.

\*\*Dearborn, Ned, and Andrews, Bill, Science Research Association, 57 W. Grand Ave., Chicago.

6. Is courteous to salespeople and others in public places.	<p>Have the group list desirable behavior traits that they would like others to show in public places, streets, movies, public conveyances, etc.; list incidents where salespeople have been rude to shoppers. From this draw a possible reason for this rudeness.</p> <p>Dramatize correct and incorrect manners for a shopper, and for the person working in public places, such as store, movie house, bus, restaurant, or cafe. Write a short sketch describing the last shopping trip he made and pointing out how the student treated the people he met. Members of the group should take part in working in the school store. Report experiences to the class. Describe a salesperson he admired very much and tell how he handled a difficult situation.</p>
7. Can count change and handle limited amounts of money.	<p>Collect class dues. Count money with a treasurer. Pupils plan how to use class money. Group outlines duties for each member. Buy supplies and bring back to class, receipt for each item or group of items bought. Group may sell tickets or have experiences in handling and accounting for money. Sell candy, popcorn or soft drinks at athletic events. Let pupils assist in the school store for one month of the year, under the supervision of older pupils and a teacher or advisor. Give each one experience in handling and accounting for money belonging to himself or the group.</p>
8. Follows good safety rules in kitchen, at home, and at school.	<p>Instruct group in the use of gas, oil, wood, coal, or electric stoves.</p> <p>Caution as to dangers in careless usage.</p> <p>Select activities for the situation.</p> <p>List possible accidents which could happen from carelessness in handling tools used in their activities. Teach proper way to use knives, scissors, razor blades, and other sharp-pointed instruments.</p> <p>Know the dangerous aspects of standing on chairs, walking on waxed floors, handling live wires, and using fire arms.</p> <p>Learn traffic regulations for pedestrians. Learn how to obey traffic lights.</p>



## SUGGESTED REFERENCES

9. Tolg, Myrtle Rudd, **Homemaking Can Be Easy.** Franklin Watts, Inc., 285 Madison Ave., N. Y. 17, 1949, pp. 69-76.  
**Homemaking for Teen-Agers,** 1951, pp. 149-162; 170.  
**Sharing Family Living,** 1951, pp. 112-120; 354-361.
10. Hatcher, Hazel M., and Andrews, Mildred E., **Adventuring in Home Living.** D. C. Heath and Co., Boston, Mass., 1954, pp. 291-295.  
**Homemaking for Teen-Agers,** 1951, pp. 369-373.  
Trilling, Mabel B., and Nicholas, Florence W., **The Girl and Her Home.** Houghton Mifflin Co., Chicago, 1947, pp. 390-400.  
**Everyday Living,** Goals 25, 29, 46.  
Film: **Cleanliness Brings Health** 16 mm 10 minutes
11. **Homemaking for Teen-Agers,** 1951, pp. 375-380.  
**Sharing Family Living,** 1951, pp. 143-154.  
Carson, Byrta, **How You Look and Dress,** McGraw-Hill Book Co., Inc., N. Y., pp. 30-46.  
**Everyday Living,** Goal 15.  
Film: **Your Clothing** 16 mm 10 minutes
12. **How You Look and Dress,** 1949, pp. 91-114.  
Jupo, Frank, **Nothing to Wear But Clothes.** Aladdin Books, N. Y., 1953.  
Film: **Synthetic Fibers:**  
**Nylon and Rayon** 16 mm 15 minutes
13. **Sharing Family Living,** 1951, pp. 205-215.  
**Everyday Living,** 1950, pp. 74-76.  
**Homemaking for Teen-Agers,** 1951, pp. 49-62.  
**Everyday Living,** Goals 18, 19.  
Film: **Other Fellow's Feelings** 16 mm 10 minutes



9. Extends his learning in caring for his room, classroom, and other buildings.	Group makes outline of work to be done at home and at school. Check lockers to evaluate house-keeping habits. Write on the subject, "Am I Doing My Share in My Home?" Keep a record for one week of the time spent in actually helping in the home or the school. From this record make a schedule for keeping rooms in order. The teacher plans these activities to suit the situation.
10. Develops appreciation for clean, attractive surroundings.	<p>Help in keeping yard free of trash, etc.</p> <p>Mark off yard and, if possible, fence off from cows, goats, sheep, chickens, or other domestic animals.</p> <p>Plant and care for flower beds.</p> <p>Keep well-arranged fresh flowers, leaves, or native plants in home; change wilted bouquets.</p> <p>Make use of simple art principles in these activities.</p>
11. Extends his ability for and interest in the care of his own clothing.	Dramatize "Modern Miss" and "Modern Mess" and have the class compare impressions. Have pupils bring to class garments that show damage caused by poor care, such as tears caused by using pins instead of regular fasteners. Have pupils decide what needs to be done to repair and put in order articles of clothing. Have pupils make and outfit a mending kit.
12. Extends knowledge of the characteristics of the more common materials used in his own clothing.	Learn how to wash and iron materials from present day fibers. Bring samples of materials to class. Discuss suitability of fabrics for school clothing. Make a trip to the weaving room or fabric shop. Discuss meaning of advertising terms, such as Sanforized, color fast, warp, woof, selvage.
13. Knows how to be friendly with children.	Have pictures on bulletin board showing activities of a child in the home. Group relates experiences with younger children in the home and at school. Find ways of helping with the physical care of children. Participate in activities with younger children. Discuss teasing small children.

## SUGGESTED REFERENCES

14. **Homemaking for Teen-Agers**, 1951, pp. 313-341.  
**Sharing Home Living**, 1951, pp. 399-415.  
**Adventuring in Home Living**, 1954, pp. 316-354.  
**Everyday Living**, Goal 22.  
Films: **How Do You Do?** 16 mm 15 minutes  
**Everyday Courtesy** 16 mm 10 minutes  
Filmstrips: **Etiquette, Set II:**  
7. **Perfect Party**
15. **Sharing Family Living**, 1951, pp. 163-165.  
**Everyday Living**, 1950, pp. 334-338.  
Wieland, Laurretta Larson, **At Work in the Kitchen**. International  
Textbook Co., Scranton, Pa., 1950, pp. 34-37.  
**Everyday Living**, Goal 30.
16. **How You Look and Dress**, 1949, pp. 17-23.  
**Adventuring in Home Living**, 1954, pp. 20-27.  
**Everyday Living**, Goal 3.

14. Assists in planning, preparing for, and conducting parties.

Class plans and gives a party. Make attractive invitations relating to season of year or activity. Make list of suitable refreshments.

Pictures of foods and decorations should be on the bulletin board. Have group make grocery order for needed supplies. Plan shopping trip. Group could decorate the paper napkins and paper table mats. Group may develop many clever ideas to carry out this activity. At close of this project have class report and evaluate knowledge gained.

15. Is able to assist in washing dishes in home or in school group.

Discuss ways of washing dishes. Make list of steps the students should follow.

The teacher demonstrates the proper procedure to the group and discusses why each step is important.

Follow acceptable procedure in washing dishes and in caring for dish cloths and dish towels.

Discuss importance of using separate cloths for different cleaning jobs in the kitchen, other than dish cloths and dish towels.

Teacher discusses with the group and demonstrates how to care for and store clean towels and dish cloths.

16. Knows how to care for the hair.

Display pictures on bulletin board, showing attractive hair arrangement suited to the age group. List advantages of having clean hair. Have students discuss their ideas about the proper care of hair. Experiment with different hair styles.

Study:    How to have clean hair.  
          How often to shampoo.  
          What to use in place of expensive shampoos.  
          How to use hair oil.

Demonstrate in class the proper way to shampoo hair.

Arrange to have a hair-cut when necessary.

## SUGGESTED REFERENCES

17. **How You Look and Dress**, 1949, pp. 1-29.  
**Homemaking for Teen-Agers**, 1951, pp. 374-395.  
**Everyday Living**, 1950, pp. 34-43.  
Neugarten, Bernice L., **How You Grow**, S.R.A., Chicago, 1952.  
**Everyday Living**, Goals 1, 3, 4, 6, 7.
- |        |                                  |       |            |
|--------|----------------------------------|-------|------------|
| Films: | <b>Growing Girls</b>             | 16 mm | 13 minutes |
|        | <b>The Story of Menstruation</b> | 16 mm | 10 minutes |
|        | <b>Your Cleanliness</b>          | 16 mm | 10 minutes |
|        | <b>How To Be Well Groomed</b>    | 16 mm | 10 minutes |
18. Johnson, William H., and Fenn, Isadore M., **Popular Tools and Materials**. Albert Whitman and Co., Chicago, 1944, pp. 1-109.  
Taylor, Jeanne, **Child's Book of Carpentry**. Greenberg Pub., N. Y., 1948.  
Collins, A. Frederick, **Working With Tools for Fun and Profit**. The New Home Library, N. Y., 1942, pp. 3-63.  
**Everyday Living**, Goal 25.
19. **Your Safety Handbook**, S. R. A., 1952.  
**Into Your Teens**, 1951, pp. 273-295.  
**Everyday Living**, Goals 29, 38.
20. **Into Your Teens**, 1954, pp. 320-323.  
**Everyday Living**, Goal 56.



17. Understands the problems of personal hygiene brought about by puberty.

After an introduction of this subject in the classroom, boys and girls should be instructed separately. Ask qualified individuals to help in teaching this goal. It might be approached by stressing the importance of being pleasing to those with whom we live. Learn importance of daily bath and clean underclothes. Study importance of good grooming.

18. Begins to learn how to use and care for simple hand tools.

Simple projects may be selected which require little skill but afford experience in the proper use and care of tools used in the home or a home workshop.

19. Reports needed repairs in the school plant.

Teach that leaky faucets waste water and add to water bills. Place a large container under a leaky faucet for a given period of time. Measure the water and compute the waste for a month. Some repairs eliminate safety hazards. Have the class make a survey of needed minor repairs. Make reports of needed repairs and hazards to the person in charge of the building or room where repairs are needed.

20. Experiences the satisfaction of doing a job well.

The children and teacher work out a schedule of work that must be followed to keep the class in order and to keep the classroom or other rooms clean and neat. The teacher should recognize and compliment work well done. Children should be led to feel satisfaction in their accomplishments in doing school details and committee or personal assignments for the class.



## SUGGESTED REFERENCES

21. \***Homemaking for Teen-Agers**, 1951, pp. 176-177; 180; 208; 224; 262; 272; 282; 293.  
 \*\***Young Folks at Home**, 1953, pp. 64-65.  
 Films: **Planning for Good Eating** 16 mm 8 minutes  
**Fun in Food** 16 mm 10 minutes
22. **Young Folks at Home**, 1953, pp. 65-70.  
 Miller, Frances S., and Laitem, Helen H., **Personal Problems of the High School Girl**. John Wiley and Sons, Inc., N. Y., 1950, pp. 255-271.  
 Lewis, Dora S., and others, **Family Meals and Hospitality**. The Macmillan Co., N. Y., 1951, pp. 3-29.  
 Brandwein, Paul F., and others, **You and Your World**. Harcourt, Brace and Co., Chicago, pp. 133-148.  
**Everyday Living**, Goal 9.  
 Film: **Fundamentals of Diet** 16 mm 11 minutes
23. **Homemaking for Teen-Agers**, 1951, pp. 149-170.  
**Young Folks at Home**, 1953, pp. 8-46.  
 \*\*\***Everyday Living**, 1950, pp. 120-131.  
 \*\*\*\***The Good Housekeeping Housekeeping Book**, 1947, pp. 247-275.  
**Everyday Living**, Goals 25-29; 32-34.
24. **Homemaking for Teen-Agers**, 1951, pp. 27-30.  
**Young Folks at Home**, 1953, pp. 378-380.  
 Hatcher, Hazel M., and Andrews, Mildred E., **Adventuring in Home Living, Book I**. D. C. Heath and Co., Boston, Mass., 1954, pp. 459-494.  
 Baxter, Laura, and others, **Our Home and Family**. J. B. Lippincott Co., Chicago, 1952, pp. 107-111.
25. **Young Folks at Home**, 1953, pp. 348-352.  
**The Good Housekeeping Housekeeping Book**. 1947, pp. 449-467.  
 Wieland, Lauretta Larson, **At Work in the Kitchen**. International Textbook Co., Scranton, Pa., 1950, p. 39.  
**Everyday Living**, Goal 51-54.  
 Filmstrip: **Cooking Series:**  
 3. **Safety in the Kitchen**
26. Lasser, J. K., and Porter, Sylvia F., **Money and You**. S.R.A., 1949, pp. 42-48.
- 
- \*McDermott and Nicholas, Charles A., Bennett Co., Inc., Peoria, Ill.  
 \*\*Harris, Florence LaGanke, and Kauffman, Treva E., D. C. Heath and Co., Boston, Mass.  
 \*\*\*Harris, Jessie W., and others, Houghton Mifflin Co., Chicago.  
 \*\*\*\*Kendall, Helen W., David McKay Co., Washington Square, Philadelphia, Pa.

21. Learns to use the Basic Seven food chart in selecting foods.
- Check meals at home or in the dining room by the Basic Seven chart. What foods are missing? Is it because they are expensive or hard to get? What foods should be bought with spending money instead of buying candy and pop? Continue to learn to eat and enjoy new foods.
22. Learns something of why the Basic Seven chart is used to select foods.
- Study briefly why the body needs proteins, starches, sugar, fats, vitamins, and minerals. Which Basic Seven groups provide these food stuff? Make a poster to show foods in Basic Seven groups. Put names with the food pictures to learn to identify them.
23. Knows how to share in keeping house.
- If students share their rooms with others, have them make a score card to check their daily and weekly housekeeping duties. Discuss keeping a room clean versus cleaning periodically. Consider these points: having a convenient place to put things, putting things away, bathroom cleanliness, methodical work habits, and willing, cheerful attitude. When sharing a room with another, start the relationship with a definite plan for joint housekeeping which is agreeable to all concerned.
24. Knows the responsibility of a "baby sitter."
- Boys and girls of this age frequently act as baby sitters, sometimes for pay but more often by taking care of their own brothers and sisters. Take care of children in the family. Take care of other children for short periods of time.
25. Knows that accidents can be prevented.
- Accidents do not just happen. There is a cause for every accident. The most important aim of a safety program is to prevent accidents. Accidents often cause pain or suffering and cost money or time. Discuss safety devices, such as guard rails, fire escapes, fire extinguishers, proper storage of sharp tools, etc. Discuss fire proof building materials and safety matches. Make a survey of safety hazards at school. Pupils may correct as many of these hazards as they can and may report others to the proper authorities.
26. Learns the advantages of saving money.
- What is thrift? In one sense it means doing away with waste. We can waste not only money but also time, energy, clothing, food, and other materials. Discuss thrift in spending, earning, and

## SUGGESTED REFERENCES

26. (Cont'd)

Trilling, Mable B., **The Girl and Her Home.** Houghton Mifflin Co., Chicago, Ill., 1947, pp. 133-135.  
Hark, Mildred, and McQueen, Noel, **Make Your Pennies Count.** S.R.A., 1952, pp. 33-37.

27. **Homemaking for Teen-Agers,** 1951, pp. 436-462.  
**Everyday Living,** 1950, pp. 282-305.  
**Everyday Living,** Goal 14.  
Shacter, Helen, and others, **Into Your Teens.** Scott, Foresman and Co., Chicago, 1951, pp. 113-120.

28. **Into Your Teens,** 1951, pp. 309-327.

29. Frankl, Lee, **Basic Tools for Woodworking.** Prentice-Hall Inc., Chicago, 1948, pp. 1-44; 97-101; 103-111.  
Johnson, William H., and Fenn, Isadore M., **Popular Tools and Materials.** Albert Whitman and Co., Chicago, Ill., 1944, pp. 1-109.  
(Good pictures for girls and boys).  
Taylor, Jeanne, **Child's Book of Carpentry.** Greenberg Publisher, N. Y., 1948.  
Fryklund, Verne C., and LaBerge, Armand J., **General Shop Woodworking.** McKnight and McKnight Publishers, Bloomington, Ill., 1946, pp. 33-37; 47-49; 78-85; 93-96.  
Shea, John Gerald, and Wenger, Paul Nolt, **Woodworking for Everybody.** Scranton-Laurel Pub. Co., Distributed by Grosset and Dunlap, N. Y., 1953, pp. 25-42; 68-69; 70-71; 114-121.  
Filmstrip: **Home Repair:**  
3. **Plumbing**



26. (Cont'd)
- saving. As an example of individual thrift, check on shoe repairs that can be made. Read about thrift and success of Benjamin Franklin. List some habits of thrift, such as buying what you can afford, paying as you go, and installment buying. Is it more economical to buy or make an article? Discuss the "Do It Yourself" movement. Visit an improved home in the community to learn what can be done.
27. Has some understanding of how to select clothing.
- Good taste in clothing includes wearing garments that are suitable, becoming, and in keeping with one's budget. Have students bring samples of common fabrics to class and make simple home tests to show characteristics. Have a qualified person discuss and show points to check in selection of clothes: what the label tells, construction, conservative styles versus fads, color, line and accessories. A trip to the stores would be helpful. Have a shoe salesman explain the importance of properly fitted shoes. Study pictures and charts on feet and shoes.
28. Learns something of what people do to make a living.
- Interview employees and friends about their work. Make a list of jobs or occupations open to men and women in the immediate community. Make posters with individual drawings to illustrate these jobs. Write short descriptions of them. Discuss which ones need training beyond high school.
29. Begins to develop a skill in general home mechanics.
- Give students the opportunity to install hooks and eyes, strap hinges, and hasps; apply stains, shellac, varnish, and paint; repair leaky faucets; make wire splices; repair shoes; cut glass and re-pane windows; install and repair window shades; know sizes of nails and screws used; understand the principle of a flush box; and change a tire.

## SUGGESTED REFERENCES

30. \***Our Home and Family**, 1952, pp. 111-114.  
 \*\***Homemaking for Teen-Agers**, 1951, pp. 11-27.  
**Everyday Living**, Goal 18.  
 Film: **Safety in the Home**                      16 mm            10 minutes
  
31. \***Sharing Family Living**, 1951, pp. 199-226.  
 \*\*\***Adventures in Home Living**, Book I., 1954, pp. 446-494.  
 McCullough, Wava, **Illustrated Handbook of Child Care**. McGraw-Hill Book Co., Inc., N. Y., 1954.
  
32. **Adventuring in Home Living**, 1954, pp. 174-176.  
 \*\*\*\***Family Meals and Hospitality**, 1951, pp. 117-120.
  
33.     Wieland, Laurette Larson, **At Work in the Kitchen**. International Textbook Co., Scranton, Pa., 1950, pp. 17-31.  
 \*\*\*\*\***Teen-Agers**, 1954, pp. 144-148.  
**Adventuring in Home Living**, 1954, pp. 152-160.  
**Sharing Family Living**, 1951, pp. 337-339.  
 Films: **Planning for Good Eating**            16 mm    8 minutes  
           **Menu Planning**                        16 mm   10 minutes  
 Filmstrip: **Cooking Series:**  
                  4. **Organizing Meals**  
                  5. **Planning Meals**
  
34. **Sharing Family Living**, 1951, pp. 329-336.  
**Everyday Living**, Goal 55.  
 Film: **Food Store**            16 mm        11 minutes  
 Filmstrip: **Cooking Series:**  
                  2. **Buying Food Wisely**
  
35. **Family Meals and Hospitality**, 1951, pp. 120-124.  
 Filmstrip: **Cooking Series:**  
                  6. **Storing Foods**
  
36. **Adventuring in Home Living**, 1954, pp. 158-173.  
**Sharing Family Living**, 1951, pp. 341-346.  
 Betz, Betty, **The Betty Betz Teen-Age Cook-Book**. Henry Holt and Co., N. Y., 1953.  
 Crocker, Betty, **Betty Crocker's Picture Cook Book**. McGraw-Hill Book Co., Inc., N. Y., 1950.

---

\*Baxter, Laura, and others, J. B. Lippincott Co., Chicago.  
 \*\*McDermott and Nicholas, Charles A. Bennett Co., Peoria, Ill.  
 \*\*\*Hatcher, Hazel M., and others, D. C. Heath and Co., Boston, Mass.  
 \*\*\*\*Lewis, Dora S., and others, The Macmillan Co., N. Y.  
 \*\*\*\*\*Jenkins, Gladys Gardner, Scott, Foresman and Co., Chicago, 1954.



- |  |  |
|--|--|
| 30. Is able to supervise younger members of the home and school in observing safety practices. | Plan for each member of the group to have the opportunity to train and supervise younger members of the home or school in observing safety practices. Help children to learn the dangers of wall outlets, sharp objects, boiling water, long pot handles, climbing, fire, and traffic.   |
| 31. Has some understanding of how to guide children's behavior and habits.                     | Have the group list good habits they think young children should acquire. Have them make a plan for helping a young child acquire good habits. Young children may enjoy participating in the program.  |
| 32. Becomes familiar with the use of some common kitchen equipment.                            | List simple equipment actually needed for the preparation of meals. Discuss the items of equipment that can be improvised. Make an exhibit of items needed, such as stoves, percolators, toasters, pots, pan, small utensils, and dishes.  |
| 33. Knows how to plan a menu for a simple meal.  | Plan a specific menu to be prepared in class. Include new foods in order to become familiar with them. Work with the dining room staff and make menus to be used in the student dining room.   |
| 34. Is able to do marketing for a simple meal.   | Discuss where to shop and the savings made by using foods in season. Organize a shopping trip to town and use shopping habits and courtesies. Visit a grocery store or market. Divide the class into small groups if possible. Make a market list for the meal to be served. Get groceries from the school kitchen or the store.     |
| 35. Knows how to store food in the home.   | Put away groceries and supplies in cupboards and refrigerator. Learn how to take care of opened canned foods. Keep all food covered to keep out flies. Learn to cover and put away leftovers.  |
| 36. Is able to prepare and serve a simple meal.  | Prepare the menu planned in Goal 33. Develop some skills in meal preparation and serving. Several meals should be served. Students will need supervision in order to develop good work habits. They will need to discuss and evaluate the problems they meet each day. Review and follow proper dishwashing practices. Wear suitable |

## SUGGESTED REFERENCES

36. (Cont'd)

**Everyday Living**, Goal 30.

Films: **Cooking: Planning and Organization**  
**Dinner Party**

16 mm

10 minutes

16 mm

22 minutes

Filmstrips: **Cooking Series:**  
 8. **Serving Meals**  
**Etiquette Set I:**  
 4. **Table Talk**  
**Etiquette Set II:**  
 6. **Table Setting**

37. **Family Meals and Hospitality**, 1951, p. 373.

38. \***Young Folks at Home**, 1953, pp. 195-211.

**Adventuring in Home Living**, Book I, 1954, pp. 33-47.

\*\***Clothes for Girls**, 1952, pp. 39-57.

**Everyday Living**, Goals 14, 17.

Filmstrips: **Teen-Age Clothing, Set I:**  
 3. **Color in Your Clothes**  
 4. **Right Clothes for You**

39. Carson, Byrta, **How You Look and Dress**. McGraw-Hill Book Co., Inc., N. Y., pp. 133-156.

**Clothes for Girls**, 1952, pp. 166-169.

**Young Folks at Home**, 1953, pp. 178-181.

**Adventuring in Home Living**, 1954, pp. 33-47.

40. **Adventuring in Home Living**, 1954, pp. 48-66.

**Personal Problems of the High School Girls**, 1950, pp. 215-227.

**Clothes for Girls**, 1952, pp. 91-118.

**Everyday Living**, Goals 14, 15, 17.

Filmstrip: **Teen-Age Clothing, Set I:**  
 2. **Care of Your Clothes**

---

\*Harris, Florence L., and Kauffman, Treva, D. C. Heath and Co., Boston, Mass.

\*\*Todd, Elizabeth, D. C. Heath and Co., Boston, Mass.

36. (Cont'd)
- clothing, including an apron, in the kitchen. Follow good hygiene practices. Be careful with colds and coughing. Wash hands before handling food.
37. Knows why food spoils.
- Perform a classroom experiment on mold growth to show children that invisible life is present. Using a potato, show what happens under the following conditions:
- a. Exposed to room atmosphere
  - b. Touched by unwashed hands
  - c. Touched by scrubbed hands
  - d. Exposed to human breath
  - e. Sterilized
- Help children evaluate the experiment.
- Correlate with contributions in the field of science.
38. Is able, with supervision, to select a suitable wardrobe for self.
- Make an inventory of one's own clothing. Observe and consider a well-dressed student. List additional clothes needed. Consider the following points: style, color, textile fiber, durability, workmanship, price, ease of caring for, fit, and suitability. Consider the cost of cleaning. Teacher should share with the class actual buying experiences. Mail order catalogs can be of great help.
- Dramatize suitable selection in an assembly program.
39. Extends knowledge of the principles of good buying.
- What is a consumer? Everyone is a consumer and needs to know how to spend money wisely. Know how to look for labels and read them. Know standards used in judging quality. Have pupils think of "good buys" they have made. Each pupil can tell why his purchase was good.
40. Extends knowledge of and his ability in caring for his own clothing.
- The child should be reminded which clothing should be cleaned by a dry cleaner. Find out the limitations and dangers of dry cleaning at home. Help the child extend his ability in washing, ironing, removing stains, mending, pressing, and making alterations. Observe the differences in various fibers and fabrics.

## SUGGESTED REFERENCES

41. **Clothes for Girls**, 1952, pp. 3-38.  
**Homemaking for Teen-Agers**, 1951, pp. 374-396.  
**Adventuring in Home Living**, 1954, pp. 4-66.  
**Teen-Agers**, 1954, pp. 100-106.  
**Everyday Living**, Goals 14-17.
42. **Adventuring in Home Living**, 1954, pp. 68-124.  
**Teen-Agers**, 1954, pp. 18-82.  
Cosgrove, Marjorie C., and Josey, Mary I., **About You**. Family Living Series, Vol. 1, S.R.A., 1952.
- |        |                         |       |             |
|--------|-------------------------|-------|-------------|
| Films: | <b>Act Your Age</b>     | 16 mm | 13½ minutes |
|        | <b>Are You Popular?</b> | 16 mm | 10 minutes  |
|        | <b>The Show-Off</b>     | 16 mm | 10 minutes  |
- Filmstrip: **Etiquette, Set I:**  
3. **As Others See You**  
5. **Stepping Out**
43. \***Everyday Living**, 1950, pp. 78-86.  
**Teen-Agers**, 1954, pp. 83-86.  
\*\***Making the Most Out of School and Life**, 1952, pp. 285-309.  
**Everyday Living**, Goal 20.
- |        |                                 |       |             |
|--------|---------------------------------|-------|-------------|
| Films: | <b>Date Etiquette</b>           | 16 mm | 10 minutes  |
|        | <b>Dating: Do's and Don't's</b> | 16 mm | 13½ minutes |

\*Harris, Jessie W., and others, Houghton Mifflin Co., Chicago.  
\*\*Robinson, Clark, The Macmillan Co., N. Y.



40. (Cont'd)

Have the group list pointers valuable in daily care, occasional care and seasonal care of clothes. For example: pressing a material that is spotted tends to set the stain; when storing summer clothes, have them unstarched and unironed.

Demonstrate and make an exhibit of simple aids to good clothing care, such as clothes hangers, clothes bags, shoe kit, shoe trees, clothes brush, spot remover, sewing kit, boxes for handkerchiefs, socks, or belts, etc.

41. Becomes more conscious of personal appearance.

Point out that few people are beautiful or handsome but appear that way because of personality, careful dressing, and makeup. Use check sheet for rating self on personal appearance. Demonstrate how different clothes look on the same person when he has good and poor posture. Check the following factors that enter into personal appearance: figure, posture, complexion, hair, hands and nails, personal grooming, and clothing.

Practice good standards in dress and haircuts. Stress suitable clothing for various occasions.

Well-planned social functions are helpful in creating an interest in personal appearance. A style show may be helpful.

42. Has an interest in and some understanding of how personality grows.

Have this question written on the board, "What is this thing called personality?" Have the class think of a person who gets along well with others. Discuss the characteristics of this person. Consider personality from the standpoint of manners, emotional control, habits, and character traits.

Let students evaluate themselves on manner and behavior. Have students list habits they have. Have them think of habits they would like to acquire. Make a plan for learning a good habit. Invite some successful and pleasing person from their own race to talk with the group.

43. Knows how to maintain good boy-girl relationships.

List the group activities that the boys and girls of the school enjoy. Which of these are best for developing friendships? Ask students for suggestions of other activities which promote good boy-girl relationships. Discuss the standards of behavior in the local school.



## SUGGESTED REFERENCES

44. **Sharing Family Living**, 1951, pp. 499-510.  
**Everyday Living**, 1950, pp. 195-204.  
**Our Home and Family**, 1952, pp. 115-127.  
**Everyday Living**, Goals 10, 11.  
 Film: **Home Nursing** 16 mm 10 minutes
  
45. \***Personal Problems of the High School Girl**, 1950, pp. 393-419.  
**Teen-Agers**, 1954, pp. 246-268.  
 Ketch, Donald E., **Exploring the World of Jobs**. S.R.A., 1952.  
**Everyday Living**, Goal 56.  
 Films: **Finding Your Life's Work** 16 mm 22 minutes  
**Aptitudes and Occupations** 16 mm 15 minutes
  
46. Johnson, William H., and Newkirk, Louis V., **Home Mechanics**. The Macmillan Co., N. Y., 1950.  
 \*\***General Shop for Everyone**, 1952, pp. 64-69.  
**Everyday Living**, Goals 52, 53.  
 Film: **Home Electrical Appliances** 16 mm 10 minutes
  
47. **General Shop for Everyone**, 1952, pp. 200-206.  
 Symons, Arthur, **The Woman's Fix-It Book**. Greenberg, N. Y., 1949, pp. 85-99.  
 Bedell, Earl L., and Gardner, Ernest G., **Household Mechanics**. International Textbook Co., Scranton, Pa., 1945, pp. 95-106.  
 Filmstrip: **Home Repairs**:  
     1. **Electrical Repairs**, Part I, 1 and 2  
     2. **Electrical Repairs**, Part II, 1 and 2
  
48. Andrews, Bill, **Your Safety Manual**. S.R.A., 1953.  
**Teen-Agers**, 1954, pp. 190-192.

---

\*Miller, Frances S., and Laitem, Helen H., John Wiley and Sons, Inc., N. Y.

\*\*Newkirk, Louis V., D. C. Heath and Co., Chicago.

44. Knows some of the simple skills in home care of the sick.	Have the students discuss the adjustments that must be made in a home when there is illness in the family. Have the group practice the help they might give in the care of a bed patient. Teach students how to keep simple records and take temperatures, pulse, and respiration, and why such records are important.
45. Is able tentatively to choose a vocation.	As the final step in his prevocational training, the student should analyze his own interests and abilities in making his vocational choice. This is done with the assistance of the classroom teacher, vocational teacher, and other agencies which are able to assist with guidance. Let student try out for short periods in those areas in which training is not offered in the general shop or home economics program. Through study, interviews, discussion, and observation, he should become familiar with first and alternate choice of a vocation in relation to his abilities.
46. Knows how to operate and take care of machines as the need arises.	<p>It is understood that machines will vary widely in the different areas of the Indian Bureau, but children should be taught to use the machines available. They should learn how the machine operates normally, why guards are installed on some machines, what to check before starting a machine, how to start and stop the machine, how to use the emergency controls, and what the machine is intended to accomplish. Train the children to ask for help at the first sign of proper operation of the machine. The student should learn to take care of the machine he uses.</p> <p>Be sure to comply with State and Federal regulations regarding operation of power machinery by students.</p>
47. Can make simple electrical repairs.	Make a simple connection of electric wires, such as an extension cord. Show examples of cords that need replacing rather than repairing. Demonstrate how to replace a fuse. Have members of the class practice repairing electrical cords.
48. Knows state highway regulations.	Highway regulations needed for passing a driver's test may be learned through the study of state highway pamphlets and discussions led by qualified drivers or a highway patrolman. Learn traffic regulations as they apply to pedestrians and bicycles. Make a survey of campus or community

## SUGGESTED REFERENCES

48. (Cont'd)

**Everyday Living**, Goal 50.

Film: **Once Upon a Time** 16 mm 10 minutes

49. Russell, Mable, and Gwynne, Elsie Wilson, **Art Education for Daily Living**. Manual Arts Press, Peoria, Ill., 1946.

**Clothes for Girls**, 1952, pp. 77-89.

Ryan, Mildred Graves, **Your Clothes and Personality**. Appleton-Century-Crafts, Inc., N. Y., 1949, pp. 20-45.

50. **Our Home and Family**, 1952, pp. 39-43.

**Personal Problems of the High School Girl**, 1950, pp. 159-161.

**Teen-Agers**, 1954, pp. 223-226.

Lasser, J. K., and Porter, Sylvia F., **Money and You**. S.R.A., 1949.

Filmstrips: **Managing Your Money:**

1. **Earning Your Money**
2. **Paying Your Bills**
3. **Spending Your Money**
4. **Borrowing Your Money**

48. (Cont'd)

traffic and recommend improvements. Have students participate in carrying out approved recommendations.
49. Develops an appreciation for design and color through several media.

Work with arts and crafts teachers when they are available. Have students use design in home living, dress, classroom activities, and in vocational projects. Use posters to illustrate class work.
50. Knows that a budget is business-like for personal spending.

Have students keep accounts of how much they spend on themselves and how much is spent for them in a month. Classify the expenditures, such as recreation, clothing, school supplies, transportation, cosmetics. Which are necessities? Which are luxuries? Make individual plans for personal spending. Follow these plans for several weeks. Check back to see if any improvement should be made in these plans.





## BOOKS LISTED IN FOOTNOTES

Books listed as references are in the Service-wide Library, Intermountain School, Brigham City, Utah. Teachers may check out these books for examination, before ordering them for the school library.

All films and filmstrips may be borrowed from the Film Library, Intermountain School, Brigham City, Utah.

### CIVIC RESPONSIBILITIES

#### Level Seven:

Helbing, Cleora C., **Minimum Essential Goals for Everyday Living**. Bureau of Indian Affairs, Department of the Interior, Washington, D. C., 1952.

Science Research Associates, 57 W. Grand Ave., Chicago 10, Ill. McDowell, Nancy E., **Your Club Handbook**, Life Adjustment Booklet.

#### Level Eight:

#### Level Nine:

### COMMAND OF FUNDAMENTALS PROCESSES—ARITHMETIC

#### Level Seven:

Knight, F. B., and others, **Study Arithmetic**, Book V. Scott, Foresman and Co., Chicago, Ill., 1948.

Morton, Robert Lee, **Making Sure of Arithmetic**, Book VII. Silver Burdett Co., Chicago, Ill., 1952.

Wheat, Harry Grove, and others, **Row-Peterson Arithmetic**, Book VII. Row, Peterson Co., Evanston, Ill., 1952.

#### Level Eight:

Fancher, Charles, and others, **Business Fundamentals for Everyone**. Prentice-Hall, Inc., N. Y., 1952.

**COMMAND OF FUNDAMENTAL PROCESSES—ARITHMETIC (Cont'd)**

**Level Eight: (Cont'd)**

Hart, Walter W., and Gregory, M. C., **General Mathematics in Daily Activities**. D. C. Heath and Co., Boston, Mass., 1948.

Nelson, Gilbert, and Grime, Hershel, **Making Mathematics Work**. Houghton Mifflin Co., Chicago, Ill., 1950.

Wheat, Harry Grove, and others, **Row-Peterson Arithmetic**, Book VIII, Row, Peterson and Co., Evanston, Ill., 1952.

**Level Nine:**

Knight, F. B., and others, **Study Arithmetic**, Book VIII, Scott, Foresman and Co., Chicago, Ill., 1948.

Nelson, Gilbert and Grimes, Hershel, **Making Arithmetic Work**. Houghton Mifflin Co., Chicago, Ill., 1950.

**COMMAND OF FUNDAMENTAL PROCESSES—ENGLISH**

**Level Seven:**

Fernald, James C., **Handbook of Synonyms, Antonyms and Prepositions**. Funk Wagnalls Co., N. Y., 1947.

Foley, Mary C., and others, **Language for Daily Use, Grade 7**. World Book Co., Yonker-on-the-Hudson, N. Y., 1955.

Green, Harry A., and Ashley, Kate, **Building Better English**, Book VII. Row, Peterson and Co., Evanston, Ill., 1952.

Johnson, Roy Ivan, **English Every Day**. Ginn and Co., Chicago, Ill., 1943.

McKee, Paul, and others, **Mastering Your Language**. Houghton Mifflin Co., Chicago, Ill., 1951.

Pollock, Thomas Parke, and Rounds, Robert W., **Words and Ideas**. The Macmillan Co., N. Y., 1954.

Science Research Associates, 57 W. Grand Ave., Chicago, Ill. Witty, Paul, **Streamline Your Reading**, Life Adjustment Booklet.

Wolfe, Don M., and others, **Enjoying English**, Grades 7, 8. L. W. Singer Co., Syracuse, N. Y., 1950.

## BOOKS LISTED IN FOOTNOTES

### COMMAND OF FUNDAMENTAL PROCESSES—ENGLISH (Cont'd)

#### Level Eight:

Cassell, Mabel V., and others, **Language Arts for Modern Youth**, Book I, II. Charles Merrill Co., Columbus, Ohio, 1939.

Ferris, Florence K., and others, **Learning Essential English**, Book VIII. Laidlaw Bros., Chicago, 1954.

Greene, Harry A., and Ashley, Kate, **Building Better English**, Grades 7, 8. Row, Peterson, Co., N. Y., 1944.

McKee, Paul, and others, Houghton Mifflin Co., Dallas. **Perfecting Your Language**, Grade 8, 1948, Chapter I.

Pollock, Thomas Clark, and others, **Thought and Expression**. The Macmillan Co., N. Y., 1954.

Stoddard, Alexander J., and others, **English, Grades 7, 8**. American Book Co., Chicago, Ill., 1948.

#### Level Nine:

Blumenthal, Joseph C., and others, **Living Language**, Grade 9. Harcourt, Brace and Co., Chicago, 1953.

Burham, Philip, **Basic Composition**, Book I. Scott, Foresman and Co., Chicago, Ill., 1949.

John, Mellie, and others, **Building Better English**, Book I. Row, Peterson and Co., Evanston, Ill., 1951.

Science Research Association, 57 W. Grand Ave., Chicago 10, Ill. Van Riper, C., **You Can Talk Better**, Junior Life Adjustment Booklet, 1953.

Tressler, J. C., and Christ, Henry I., **English in Action**, Course 1. D. C. Heath and Co., Boston, Mass. 1955.

## SCIENCE

#### Level Seven:

Beauchamp, Wilbur L., and others, **Discovering Our World**. Scott, Foresman Co., Chicago, Ill., 1947.

Beauchamp, Wilbur L., and others, **Science Problems I**. Scott, Foresman and Co., 1951.

## BOOKS LISTED IN FOOTNOTES

### SCIENCE (Cont'd)

#### Level Seven: (Cont'd)

Beauchamp, Wilbur L., and others, **Solving Science Problems Workbook I.** Scott, Foresman and Co., 1951.

Caldwell, Otis W., and Curtis, Francis D., **Everyday Science.** Ginn and Co., Chicago, Ill., 1946.

Masson, Louis T., **General Science Made Easy.** Garden City, N. Y. 1942.

Watkins, Ralph K., and Perry, Winifred, **Science for Daily Use.** The Macmillan Co., N. Y., 1940.

Watkins, Ralph K., and Perry, Winifred, **Understanding Science.** The Macmillan Co., N. Y., 1940.

Wight, Edgar L., **Classroom Activities Relating to Natural Resources.** Bureau of Indian Affairs, Department of the Interior, Washington, D. C.

#### Level Eight:

Beauchamp, Wilbur L., and others, **Discovering Our World.** Scott, Foresman and Co., Chicago, Ill., 1947.

Beauchamp, Wilbur L., **Science Problems I.** Scott, Foresman and Co., Chicago, Ill., 1951.

Brandwein, Paul F., and others, **You and Science.** Harcourt, Brace and Co., N. Y., 1955.

Brandwein, Paul F., and others, **Science for Better Living.** Harcourt, Brace and Co., N. Y., 1955.

Burnett, R. Will, **New World of Science.** Silver Burdett Co., Chicago, Ill., 1953.

Caldwell, Otis W., and Curtis, Francis D., **Everyday Science.** Ginn and Co., Chicago, Ill., 1946.

Carroll, Franklin B., and others, **Understanding the Universe.** John Winston Co., Chicago, Ill., 1943.

Craig, Gerald S., and Hyde, Margaret Oldroyd, **New Ideas in Science.** Ginn and Co., Chicago, Ill., 1946.

Craig, Gerald S., and Urben, John, **Science Plans for Tomorrow.** Ginn and Co., Chicago, Ill., 1946.

## BOOKS LISTED IN FOOTNOTES

### SCIENCE (Cont'd)

#### Level Eighth: (cont'd)

Davis, C. I., and others, Science, **A Story of Experiment and Discovery**. Henry Holt and Co., N. Y., 1954.

Eisman, Louis, and Tanzer, Charles, **Biology and Human Progress**. Prentice-Hall, Inc., N. Y., 1955.

Masson, Louis T., **General Science Made Easy**, 1942. Garden City Pub. Co. Inc., Garden City, N. Y.

Meister, Morris, and others, **Wonderworld of Science**. Charles Scribner's Sons, Chicago, Ill., 1948.

Parker, Bertha Morris, **Electricity**. Row, Peterson and Co., Evanston, Ill., 1944.

Parker, Bertha Morris, **Heat**. Row, Peterson and Co., Evanston, Ill., 1942.

Wight, Edgar L., **Classroom Activities Relating to Natural Resources**. Bureau of Indian Affairs, Department of the Interior, Washington, D. C.

#### Level Nine:

Beauchamp, Wilbur L., and others, **Discovering Our World**, Book III. Scott, Foresman and Co., Chicago, Ill., 1947.

Beauchamp, Wilbur L., and others, **Science Problems I**. Scott, Foresman and Co., Chicago, Ill., 1951.

Brandwein, Paul F., **You and Science**. Harcourt, Brace and Co., N. Y., 1955.

Caldwell, Otis W., and Curtis, Francis D., **Everyday Science**. Ginn and Co., Chicago, Ill., 1946.

Craig, Gerald S., and Hyde, Margaret Oldroyd, **New Ideas in Science**. Ginn and Co., Chicago, Ill., 1946.

Masson, Louis T., **General Science Made Easy**. McGraw-Hill Book Co., N. Y., 1942.

Meister, Morris, and others, **Wonderworld of Science**, Book VIII. Charles Scribner's Sons, Chicago, Ill., 1948.

Watkins, Ralph K., and Perry, Winifred, **Science for Daily Use**. The Macmillan Co., N. Y., 1940.

Wight, Edgar L., **Classroom Activities Relating to Natural Resources**. Bureau of Indian Affairs, Department of the Interior, Washington, D. C., 1952.



HEALTH

Level Seven:

Helbing, Cleora C., **Minimum Essential Goals for Everyday Living.** Bureau of Indian Affairs, Department of the Interior, Washington, D. C.

Burkhard, William E., and others, **You and Your Health.** Lyons & Carnahan, Chicago, Ill., 1952.

Jones, Edwina, and others, **For Healthful Living.** Laidlaw Bros., 2121 Staunton Court, Palo Alto, Calif., 1954.

O’Keefe, Pattric Ruth, and Maxwell, Cyrus H., **Adventures in Living.** John C. Winston Co., Chicago, Ill., 1954.

Science Research Associates, 57 W. Grand Ave., Chicago, Ill., 1952. Kirkendall, Lester A., **Helping Children Understand Sex** (a pamphlet).

Shacter, Helen and others, **You’re Growing Up.** Scott, Foresman and Co., Chicago, Ill., 1950.

Level Eight:

Charters, W. W., and others, **A Sound Body.** The Macmillan Co., N. Y., 1947.

Clemensen, Jessie Williams, and La Porte, William Ralph, **Your Health and Safety.** Harcourt, Brace and Co., N. Y., 1952.

Shacter, Helen and others, **Into Your Teens.** Scott, Foresman and Co., Chicago, Ill., 1951.

Trott, Lona L., **Red Cross Home Nursing,** School Edition. Blakiston Co., Philadelphia, Pa., 1948.

Level Nine:

Burkhard, William E., and others, **You and Your Health.** Lyons and Carnahan, Chicago, Ill., 1953.

Burkhard, William E., and others, **Good Health For All.** Lyons and Carnahan, Chicago, Ill., 1953.

Goldberger, I. H., and Hallock, Grace T., **Understanding Health.** Ginn and Co., Boston, Mass., 1950.

## BOOKS LISTED IN FOOTNOTES

### HEALTH (Cont'd)

#### Level Nine: (Cont'd)

Jenkins, Gladys Gardner, and others, **Teen-Agers**. Scott, Foresman and Co., Chicago, Ill., 1954.

Landis, Judson T., and Landis, Mary G., **Building Your Life**. Prentice-Hall Inc., N. Y.

Trott, Lona L., **Red Cross Home Nursing**. Blakiston Co., Philadelphia, Pa., 1948.

### VOCATIONS

#### Level Seven:

Baxter, Laura, and others, **Sharing Family Living**. J. B. Lippincott Co., Chicago, Ill., 1951.

Dearborn, Ned, and Andrews, Bill, **Your Safety Handbook**. Science Research Associates, 57 W. Grand Ave., Chicago, Ill., 1952.

Harris, Jessie W., and others, **Everyday Living**. Houghton Mifflin Co., Chicago, Ill., 1950.

McDermott, Irene E., and Nicholas, Florence W., **Homemaking for Teen-Agers**. Charles A. Bennett Co., Inc., Peoria, Ill., 1951.

Shacter, Helen, and others, **Into Your Teens**. Scott Foresman and Co., Chicago, Ill., 1951.

#### Level Eight:

Harris, Florence La Ganke, and Kauffman, Treva E., **Young Folks at Home**. D. C. Heath and Co., Boston, Mass., 1953.

Harris, Jessie W., and others, **Everyday Living**. Houghton Mifflin Co., Chicago, Ill., 1950.

Kendall, Helen W., **The Good Housekeeping Housekeeping Book**. David McKay Co., Washington Square, Philadelphia, Pa., 1947.

McDermott and Nicholas, **Homemaking for Teen-Agers**. Charles A. Bennett Co., Inc., Peoria, Ill., 1951.

## BOOKS LISTED IN FOOTNOTES

### VOCATIONS (Cont'd)

#### Level Nine:

Baxter, Laura and others, **Our Home and Family**. J. B. Lippincott Co., Chicago, Ill., 1952.

Baxter, Laura and others, **Sharing Family Living**. J. B. Lippincott Co., Chicago, Ill., 1951.

Harris, Florence L., and Kauffman, Treva, **Young Folks at Home**. D. C. Heath and Co., Boston, Mass., 1953.

Harris, Jessie W., and others, **Everyday Living**. Houghton Mifflin Co., Chicago, Ill., 1950.

Hatcher, Hazel M., and Andrews, Mildred E., **Adventuring in Home Living**. Book I. D. C. Heath and Co., Boston, Mass., 1954.

Jenkins, Gladys Gardner, and others, **Teen-Agers**. Scott, Foresman and Co., Chicago, Ill., 1954.

Lewis, Dora S., and others, **Family Meals and Hospitality**. The Macmillan Co., N. Y.

McDermott and Nicholas, **Homemaking for Teen-Agers**. Charles A. Bennett Co., Inc., Peoria, Ill., 1951.

Miller, Frances S., and Laitem, Helen H., **Personal Problems of the High School Girl**. John Wiley and Sons, Inc., N. Y., 1950.

Newkirk, Louis V., **General Shop for Everyone**. D. C. Heath and Co., Chicago, Ill., 1952.

Robinson, Clark, **Making the Most Out of School and Life**. The Macmillan Co., N. Y., 1952.

Todd, Elizabeth, **Clothes for Girls**. D. C. Heath and Co., Boston, Mass., 1952.

## BOOKS POPULAR WITH JUNIOR HIGH READERS

- Arnold, Elliott, **Broken Arrow**. Little, Brown
- Baker, L., **Out on a Limb**. McGraw, 1946
- Balch, Glenn, **Indian Fur**. Crowell, 1951
- Beim, Lorraine and Beim, Jerrold, **Blue Jeans**. Harcourt, Brace
- Benson, Sally, **Junior Miss**. Doubleday, 1947
- Blackmore, Richard D., **Lorna Doone** (adapted). Scott, Foresman, 1938
- Boylston, Helen D., **The Sue Barton Books**. Little, Brown
- Brier, Howard M., **Blackboard Magic**, and others. Random
- Burnett, Frances Hodgson, **The Secret Garden**. Lippincott
- Cavanna, Betty, **Going on Sixteen, Spring Comes Riding**. Westminster
- Carr, Mary James, **Children of the Covered Wagon**. Crowell, 1943.
- Clemens, Samuel Langhorne, **Huckleberry Finn** (adapted). Scott, Foresman  
**Tom Sawyer** (adapted).
- Daly, Maureen, **Seventeenth Summer**. Dodd
- Darby, Ada Clare, **Skip-Come-a-Lou**. Lippincott
- Downey, Fairvax, **Dog of War**. Dodd
- Du Jardin, Rosamund, **Wait for Mercy**. Lippincott
- Fairfax, Virginia, **Su Won and Her Wonderful Tree**. Dutton
- Farley, Walter, **The Black Stallion Series**. Random House
- Felsen, Henry, **Hot Rod, Bertie Makes a Break**. Dutton  
**Street Rod, and others**. Random House
- Forbes, Kathryn, **Mama's Bank Account**. Harcourt, Brace
- Fox, Genevieve, **Mountain Girl**. Little, Brown, 1932
- Franklin, George Cory, **Monte**. Houghton, Mifflin
- Gail, Otto W., **By Rocket to the Moon**. Dodd

## BOOKS POPULAR WITH JUNIOR HIGH READERS

- Gates, Doris, **Blue Willow, North Fork, Little Vic.** Viking
- Grey, Zane, **The Young Pitcher.** Grosset
- Henry, Marguerite, **Brighty of the Grand Canyon.** Rand, McNally
- Hinckle, Thomas C., **Bugle, Hurricane Pinto, and others.** Morrow
- James, Will, **Smoky.** Scribner
- Kjelgaard, Jim, **Outlaw Red, Big Red.** Holliday, 1953
- Knight, Eric, **Lassie Come Home.** Winston
- London, Jack, **Call of the Wild.** Grosset
- Louis, Joe, **The Joe Louis Story.** Grosset
- McCracken, Harold, **Great White Buffalo.** Lippincott, 1946
- Meador, Steve W., **Shadow in the Pines.** Harcourt, Brace
- Messner **Adventure Series** (biography). Messner
- Montgomery, Rutherford, **Mystery of the Turquoise Frog, Yellow Eyes, Broken Fang,** and others. Caxton
- Newcomb, C., **Silver Saddles.** Longmans
- O'Brien, Jack, **The Silver Chief Series.** Grosset
- O'Hara, Mary, **Thunderhead.** Lippincott, 1943
- Schoor, Gene, **Jim Thorpe Story.** Messner
- Stevenson, Robert Louis, **Treasure Island** (adapted). Scott, Foresman
- Tunis, John R., **Rookie of the Year, Keystone Kids,** and others. Morrow
- Wilder, Laura Ingalls, **The Long Winter, The Little Town on the Prairie.** Harper
- Wyatt, Edgar, **Cochise.** McGraw, 1953





W17 811



Deacidified using the Bookkeeper process.  
Neutralizing agent: Magnesium Oxide  
Treatment Date: March 2010

**PreservationTechnologies**  
A WORLD LEADER IN COLLECTIONS PRESERVATION

111 Thomson Park Drive  
Cranberry Township, PA 16066  
(724) 779-2111





JAN 81



N. MANCHESTER,  
INDIANA 46962



LIBRARY OF CONGRESS



0 024 427 788 3